DOCUMENT RESUME

ED 265 245 UD 024 644

AUTHOR	Betsey, Charles L., Ed.; And Others
TITLE	Youth Employment and Training Programs. The YEDPA Years.
INSTITUTION	National Academy of Sciences - National Research Council, Washington, DC. Commission on Behavioral and Social Sciences and Education.
SPONS AGENCY	Department of Labor, Washington, D.C.
REPORT NO	ISBN-0-309-03595-3
PUB DATE	85
GRANT	99-3-3239-75-120-01
NOTE	532p.
AVAILABLE FROM	National Academy Press, 2101 Constitution Avenue, N.W., Washington, DC 20418 ($24.95 prepaid).
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF02/PC22 Plus Postage.
DESCRIPTORS	Blacks; Employment Opportunities; *Employment Programs; *Federal Programs; Females; Hispanic Americans; Job Placement; Job Skills; *Job Training; *Program Effectiveness; Program Implementation; Unemployment; *Youth; *Youth Employment; Youth Programs
IDENTIFIERS	Census 1980; *Youth Employment and Demonstration Projects Act

ABSTRACT

This study is an evaluation of the Youth Employment and Demonstration Projects Act (YEDPA) which was in effect from 1977-1981. The first chapter summarizes the youth employment problem and draws conclusions and makes recommendations based upon the data in the report. The next chapter draws a detailed picture of the youth unemployment problem, showing the widening gap between black and other youth in finding and keeping jobs, as well as the increasing problems for Hispanics and children from low income families. Chapter 3 describes the implementation of YEDPA and shows how the legislative mandates, time schedules, and program and policy environment in which it operated determined the course of its programs and created constraints on its operation. Chapter 4 outlines the procedures used in evaluating the effectiveness of the programs. Chapters 5-8 report on the effectiveness of the occupational skills training, labor market preparation, temporary jobs, and job placement programs. Chapter 9 summarizes the research on program effectiveness derived from large, representative national samples, using national data bases. Appendices which are half of this report include: (1) "Standardized Data Collection for Large-Scale Program Evaluation: An Assessment of the YEDPA-SAS Experience" (Charles F. Turner); (2) A list of reports considered by the committee in its assessment--150-item bibliography; (3) "Implications of the Youth Employment Experience for Improving Applied Research and Evaluation Policy" (Robert Boruch); and (4) "Estimates of Effects of Employment and Training Programs Derived from National Longitudinal Surveys and Continuous Longitudinal Manpower Survey" (Valerie Nelson and Charles F. Turner). These reports are followed by five commissioned papers: "Knowledge Development under the Youth Employment and Demonstration Projects Act, 1977-1981" (Richard F. Elmore); "The Social Context of Youth Employment Programs" (Elijah Anderson); "Youth Joblessness and Race: Evidence from the 1980 Census" (George Cave); "Hispanic Youth in the Labor Market: An Analysis of High School and Beyond" (Roberto Fernandez; and "The Participation of Young Women in Employment and Training Programs" (Margaret Simms). The study includes a brief index. (CG) (CG)

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
● Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY
Dept. of Labor

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: UD
In our judgment, this document is also of interest to the Clearinghouses noted to the right. Indexing should reflect their special points of view. CE

ED265245

YOUTH EMPLOYMENT AND TRAINING PROGRAMS

THE YEDPA YEARS

UD 024644

NRC

YOUTH EMPLOYMENT AND TRAINING PROGRAMS

THE YEDPA YEARS

Charles L. Betsey, Robinson G. Hollister, Jr.,
and Mary R. Papageorgiou, editors

Committee on Youth Employment Programs
Commission on Behavioral and Social Sciences
and Education
National Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1985

National Academy Press • 2101 Constitution Avenue, NW • Washington, DC 20418

NOTICE: The project that is the subject of this report was approved by the Governing Board of the National Research Council, whose members are drawn from the councils of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine. The members of the committee responsible for the report were chosen for their special competences and with regard for appropriate balance.

This report has been reviewed by a group other than the authors according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

The National Research Council was established by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and of advising the federal government. The Council operates in accordance with general policies determined by the Academy under the authority of its congressional charter of 1863, which establishes the Academy as a private, nonprofit, self-governing membership corporation. The Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in the conduct of their services to the government, the public, and the scientific and engineering communities. It is administered jointly by both Academies and the Institute of Medicine. The National Academy of Engineering and the Institute of Medicine were established in 1964 and 1970, respectively, under the charter of the National Academy of Sciences.

This project has been funded with federal funds from the U.S. Department of Labor under contract number 99-3-3239-75-120-01. The contents of this publication do not necessarily reflect the views or policies of the Department of Labor.

Library of Congress Cataloging-in-Publication Data
Main entry under title:

Youth employment and training programs.

Bibliography: p.
Includes index.
1. YEDPA programs—Addresses, essays, lectures.
2. Youth—Employment—United States—Addresses,
essays, lectures. 3. Occupational training—United
States—Addresses, essays, lectures. I. Betsey,
Charles L. II. Hollister, Robinson G.
II. Papageorgiou, Mary R. IV. National Research
Council (U.S.). Committee on Youth Employment Programs.
HD6273.Y6548 1985 331.3'42592'0973 85-25856
ISBN 0-309-03595-3

Printed in the United States of America

COMMITTEE ON YOUTH EMPLOYMENT PROGRAMS

ROBINSON G. HOLLISTER, JR. (Chair), Department of Economics, Swarthmore College
ROBERT F. BORUCH, Department of Psychology, Northwestern University
RAYMOND J. CARROLL, Department of Statistics, University of North Carolina
JAMES S. COLEMAN, Department of Sociology, University of Chicago
ROBERTO M. FERNANDEZ, Department of Sociology, University of Arizona
JUDITH M. GUERON, Manpower Demonstration Research Corporation, New York
JOEL F. HANDLER, School of Law, University of California, Los Angeles
PATRICK W. MOORE, San Diego Regional Employment and Training Consortium
RONALD L. OAXACA, Department of Economics, University of Arizona
JOHN OGBU, Department of Anthropology, University of California, Berkeley
PAUL OSTERMAN, Department of Economics, Boston University
PAUL E. PETERSON, Brookings Institution, Washington, D.C.
HARRIET B. PRESSER, Department of Sociology, University of Maryland
WILLIAM J. WILSON, Department of Sociology, University of Chicago
DAVID A. WISE, John F. Kennedy School of Government, Harvard University

CHARLES L. BETSEY, Study Director
MARY R. PAPAGEORGIOU, Research Associate
CHARLES TURNER, Senior Research Associate

Contents

Preface ... vii

1 Summary, Conclusions, and Recommendations ... 1
2 Youth Employment and Unemployment ... 34
3 Implementation of the Youth Employment and Demonstration Projects Act ... 69
4 Procedures Used in Evaluating the Effectiveness of YEDPA Programs ... 99
5 Effectiveness of Occupational Skills Training Programs ... 108
6 Effectiveness of Labor Market Preparation Programs ... 119
7 Effectiveness of Temporary Jobs Programs ... 137
8 Effectiveness of Job Placement Programs ... 161
9 Evidence of Program Effectiveness From National Data Bases ... 175

References ... 183

Appendices ... 193

A Standardized Data Collection for Large-Scale Program Evaluation: An Assessment of the YEDPA-SAS Experience ... 193
Charles F. Turner

B Report List ... 220

C Implications of the Youth Employment Experience for Improving Applied Research and Evaluation Policy ... 231
Robert Boruch

D Estimates of Effects of Employment and Training Programs Derived from National Longitudinal Surveys and Continuous Longitudinal Manpower Survey ... 254
Valerie Nelson and *Charles F. Turner*

Commissioned Papers 281

Knowledge Development Under the Youth Employment and Demonstration Projects Act, 1977-1981 281
Richard F. Elmore

The Social Context of Youth Employment Programs 348
Elijah Anderson

Youth Joblessness and Race: Evidence from the 1980 Census 367
George Cave

Hispanic Youth in the Labor Market: An Analysis of High School and Beyond 410
Roberto Fernandez

The Participation of Young Women in Employment and Training Programs . 462
Margaret Simms

Index 487

Preface

In October 1983 the U.S. Department of Labor requested that the National Research Council undertake a study assessing knowledge about youth employment and training programs, based primarily on programs carried out under the Youth Employment and Demonstration Projects Act (YEDPA). The Committee on Youth Employment Programs was formed in the Commission on Behavioral and Social Sciences and Education to carry out that task and worked on it from fall 1983 through spring 1985. This report is the result of the committee's efforts.

The rationale of this report can best be understood in light of the charge to the committee, the nature of the Youth Employment and Demonstration Projects Act activities, and the fashion in which the committee went about its work.

The committee's charge covered four tasks:

- To review what is known about the effectiveness of the principal types of YEDPA programs;
- To assess existing knowledge regarding the implementation of youth employment programs;
- To evaluate the YEDPA research strategy;
- To summarize the lessons learned from YEDPA for future policy development and program implementation.

The Youth Employment and Demonstration Projects Act was passed by Congress and signed into law by President Jimmy Carter in late 1977. The programs grouped under this act ran approximately from 1978 through 1981, after which they were terminated or reorganized by the new administration.

YEDPA represented a substantial and rapid increase in expenditures by the federal government on youth employment and training programs, and YEDPA activities encompassed several different major types of programs. The diversity of programs was further increased by the explicit injunction in the legislation "to test the relative efficacy of different ways of dealing with these [youth employment problems] in different local contexts" and the resulting substantial allocation of money to demonstration and research activities that were intended to demonstrate a wide variety of program concepts and attempt to assess them. It is estimated that over the 4-year period of YEDPA operations, about $600 million was allocated for explicit demonstration programs and their related research and that, even in the first year, 1978, as many as 60 distinct demonstrations were funded in about 300 sites. The Office of Youth Programs, which administered YEDPA, stressed the "knowledge development" aspects of these demonstration and research activities and sponsored extensive reporting and data gathering concerning them.

It is not surprising, then, that our committee found itself faced with more than 400 reports, gathered by the Employment and Training Administration of the Department of Labor, which became the basic raw materials for our review of YEDPA. We found this mass of material both too much and too little. It was too much in the sense of presenting a serious challenge to the committee to design a strategy that would make it possible to assess so much material thoroughly and in the time available. It was too little in that such reports on individual programs were not likely to provide broad and comprehensive views of either the nature of youth employment problems or the nationwide operations of YEDPA. In this preface I attempt to indicate how we sought to solve these problems and, at the same time, to outline for the reader the structure and rationale of the report.

As a first step, the committee members and staff sought to review and summarize the research on the nature of the youth employment problem; some of the research had been sponsored by YEDPA, but much of it was carried out independently, or under other sponsorship, by scholars and research groups. The fruits of this work are represented in Chapter 2. This task was made considerably easier by the existence of several excellent overviews of research in this field (which are referenced in Chapter 2). When entangled in a review of the details of YEDPA processes and programs, it is easy to lose sight of the very serious employment difficulties faced in 1978 by those youths whom YEDPA was designed to serve, problems that youths in 1985 appear to face in roughly the same degree. For that reason the committee found the material in Chapter 2 both a very important background and a reminder, as we proceeded through the rest of our work, not to lose sight of the situation of the population at risk. We hope readers will find that material useful in a similar fashion.

A second element in our strategy was to seek to deal with the more than 400 reports. The committee developed a set of criteria—standards of evidence—according to which the reports were to be vetted. The standards constituted the minimum required for a report to be judged good social science evidence of the effects of a program on its participants. The staff, assisted by several outside consultants, screened all the reports according to the standards and then classified those meeting the standards according to program type and target groups served. (This screening process is described in Chapter 4.) This process resulted in a severe reduction in the number of projects that were to be reviewed in depth: only 28 projects met our standards for in-depth committee review. This sharp reduction in the number and scope of projects that met even our minimal standards of evidence greatly surprised us, and it must be discouraging for those who had hoped for more—in terms of sheer volume of results—from the YEDPA knowledge development process.

The committee then turned to an in-depth review of those projects. This was accomplished by dividing into four subcommittees, one for each of the four major categories of program types: occupational skills training, labor market preparation, temporary jobs, and job placement. The subcommittees and staff thoroughly reviewed all the reports, and the committee then held a five-day working conference to review and debate the subcommittee conclusions and begin drafting what eventually became Chapters 5 through 8. Those chapters contain our review of what is known and not known about the effectiveness of youth employment and training programs, based primarily, though not exclusively, on the YEDPA experience. The draft reports of the subcommittees were edited, amended, supplemented, and converted into the present report chapters primarily by staff member Charles Betsey. Important additional work on assessing the sizable data base on YEDPA programs created by the Educational Testing Service was undertaken by staff member Charles Turner and appears as Appendix A.

Chapters 5 through 8 represent the bulk of the committee's work, and we have chosen to present that work in considerably greater detail than is the practice in more general reviews. We felt it was important to make it possible for readers to find the details of evidence upon which our conclusions and recommendations are based and to lay bare the unevenness in coverage and weaknesses of the material we used, as well as the strengths.

We also faced, as part of our charge, the task of drawing lessons about the implementation of youth programs from the YEDPA experience. This called for assessments of implementation both at the national level of YEDPA design and at the local level of program realization. The latter assessment could, to some degree, be drawn from the mass of 400 reports on YEDPA activities. Thus, as the reports were screened according to our criteria of effectiveness, we also noted those cases in which the reports appeared to provide useful information regarding program implementation. These reports provided a body of material on specific program implementation, but we wanted to supplement this material to broaden our view of implementation.

This desire led us to the third major element of our strategy: to reach outside the committee and its staff. To deal with the task of drawing general conclusions about implementation at the local level, we commissioned three short papers based on the material identified during our screening process and the authors' own experiences with youth employment and training programs. These papers by Erik Butler, James Darr, and Philip Moss provided useful additions to our own review. We also wanted to obtain a very broad perspective on the design and implementation of YEDPA at the national level. To this end, at a relatively early stage in our deliberations, we asked Richard Elmore to carry out a substantial review of the development and administration of YEDPA. This review was critical for the committee both because of its comprehensiveness and quality and because of its timeliness; it appears as the first of the commissioned papers in this volume.

Elmore was able to provide the committee with a draft of his review prior to our five-day working conference and to attend the conference for a few days to discuss the details of his review with the committee. Many committee members, myself included, found his paper a very important part of our education about YEDPA; it brought together many elements of the development and administration of YEDPA at the national level and presented the views of many of the key actors in those events. This does not mean that the committee endorses all the characterizations of events or conclusions about processes given in Elmore's paper, but we believe it is a valuable paper for understanding the YEDPA experience, and it was helpful to us in drafting Chapter 3 (as well as other sections of our report). Chapter 3, then, provides the details of our review of implementation of YEDPA programs, based on the program reports themselves and the other materials. The chapter was largely drafted by staff member Mary Papageorgiou.

The third element of our strategy—reaching beyond the committee for assistance in filling gaps in information and knowledge—involved not only the papers on issues of implementation but also on other topics for which the committee felt its own expertise was lacking or for which reviews of the literature proved insufficient to fill important gaps. It should be noted that all of the papers we commissioned were written under considerable time pressure, as in most cases we did not identify the gaps in knowledge until our deliberations were well under way. In those cases in which we felt the commissioned papers not only served the immediate needs of the committee but also were likely to be of general interest to readers of this report, they are included in this volume.

We reached outside the committee and staff not only through papers but also through personal contacts. At a very early stage of our work, Andrew Sum of Northeastern University, who has had a broad and continuing acquaintance with youth employment and training programs, met with the committee and provided an overview of programs and youth employment problems that helped many of us to become quickly acquainted with developments in this field. Seymour Brandwein of the Department of Labor, who was at the National Research Council as a visiting scholar during our study, provided continuing advice and guidance to the committee and staff on the basis of his long and thoughtful experience with employment and training programs. Several committee members and staff met with staff members of two other organizations that had been involved in reviews of YEDPA program effectiveness: Andrew Hahn and Robert Lerman of Brandeis University and Linda Cole, Norman Freeberg, Jules Goodison, and Donald Rock of the Educational Testing Service. Both groups gave generously of their time, as well as of materials they had developed for their own reviews.

In addition to reaching beyond the mass of reports on YEDPA programs through commissioned papers and personal contacts, we felt it important to consider other sources of data that had been, or could be, used to assess the effectiveness of youth employment and training programs. Conspicuous among these sources were two national data bases, the Continuous Longitudinal Manpower Survey (CLMS) and the special youth sample of the National Longitudinal Surveys (NLS). Our review and assessment of studies based on these two major data bases is provided in Chapter 9, which was largely drafted by Valerie Nelson, who served as a consultant throughout the project, and staff member Charles Turner. While this review of studies from CLMS and NLS did not alter in any respect our conclusions about the effectiveness of youth programs, it did provide some very important information bearing on appropriate methods of evaluation of youth programs that we believe significantly strengthens the basis for our recommendations on the use of random assignment.

Now, at last, we come to the rationale for the chapter that we have placed first, "Summary, Conclusions, and Recommendations." This chapter constitutes the committee's response to the charge with which we began our work, which is the principal reason we have elected to put it at the front of our report. Readers will find in this chapter the committee's major findings, conclusions, and recommendations about the nature of the youth employment problem, the implementation of youth employment and training programs, the effectiveness of different types of programs for different segments of the youth population problem, the strengths and weaknesses of methods of research on and evaluation of youth programs, and the future evolution of youth employment and training programs and research on them. We are grateful to staff member Mary Papageorgiou for drafting and redrafting many versions of this chapter as the committee debated the issues.

Chapter 1 obviously cannot stand entirely on its own, but depends on the detailed material that is provided in the rest of the report. However, as I noted above, because the material that the committee was asked to assess was so sizable and complex, we felt that the main chapters of the report had to have greater detail than is usual in such reports. Since not all readers will want to work their way through that detail in order to reach our summary statements, we chose to broaden the opening chapter of conclusions and recommendations to provide a reprise of major themes and to make explicit the limitations of our review and the references to the particular programs upon which each conclusion is based.

In addition to the efforts of the committee and its staff, the contributions of several other people should be acknowledged. Fred Romero and William Showler of the U.S. Department of Labor provided essential support to the project and access to the materials on which the report is based. David A. Goslin, Executive Director of the Commission on Behavioral and Social Sciences and Education provided useful guidance at several critical junctures. Eugenia Grohman, Associate Director for Reports of the commission, worked with the authors and the National Academy Press to edit and produce this volume. Jean Shirhall provided additional editorial assistance, and Deborah Faisson prepared the manuscript through many revisions. This report would not exist without the contributions of these people.

In closing this preface, I would like to emphasize that the committee and staff members have been motivated throughout our work by awareness of, and concern about, the continuing problems of young people in our society—particularly those who have dropped out of school, black and Hispanic youths, and women, especially those who are unmarried and have children—in obtaining and holding a decent job. We have not hesitated to indicate when evidence is inadequate, or completely lacking, to point the way toward more effective policies and programs, and we have tried to draw the lessons from past experiences that may help to avoid the repetition of past mistakes. Since, however, the problems persist, we are concerned that the identification of mistakes of the past not become a basis for failure to act in the present. We must continue to try to enhance youth employment opportunities. It is our hope that this report helps to delineate such a path for continuing efforts.

Robinson Hollister, Jr., *Chair*
Committee on Youth
Employment Programs

YOUTH EMPLOYMENT AND TRAINING PROGRAMS

THE YEDPA YEARS

1
Summary, Conclusions, and Recommendations

In response to high levels of unemployment and other employment-related problems of American youth, the federal government enacted the Youth Employment and Demonstration Projects Act (YEDPA; P.L. 95-93) in 1977. This legislation established a variety of employment, training, and demonstration programs for youth. With the passage of YEDPA, federal spending on employment programs earmarked for youth approximately doubled, bringing the total to about $2 billion per year. Besides this substantial commitment of funds, YEDPA was unique in its explicit commitment of substantial resources to research and evaluation efforts intended to test alternative ways of meeting the needs of youth.

YEDPA programs ended in 1981 with the change in presidential administration. At that time the products of YEDPA's research had not been comprehensively evaluated, and there were questions about what had been learned from this undertaking. Two years later the U.S. Department of Labor (DOL) requested that the National Research Council (NRC) review the products of the YEDPA research effort. The following eight chapters detail the findings from that review; this chapter summarizes our findings, conclusions, and recommendations.

THE NATURE OF THE YOUTH EMPLOYMENT PROBLEM

In focusing on the nature of the youth employment problem at the end of the 1970s, as YEDPA began, it is helpful to note that the majority of out-of-school youths found jobs and, when they lost or left a job, found another one without a long period of unemployment. It has long been recognized, however, that youth employment is more sensitive to the cycles of economic activity (recession and expansion) than is that of adults: the percentage decline in employment during a recession is generally greater for youths than for adults, but the percentage increase in employment during recovery is also greater than for adults. What was much more disturbing was the worsening long-term trend--which emerged clearly in the 1970s--in the employment rates of youths relative to adults, even when measured from the peak of expansion of one business cycle to the next. Furthermore, the data reveal substantial differences in that trend according to the race and sex of the youths; the long-term trend in employment was much worse for minority, principally black, groups than it was for the white majority.

The most revealing picture emerges from data on employment-to-population rates that separate subgroups of the youth population by race, sex, and school status. Those data show that from 1964 to 1978 there was a growing gap between the employment-to-population ratios of white and black youths, for both in-school and out-of-school youths. For in-school youths, employment rates for whites were growing while rates for black males were falling and those for black females were not growing as fast, yielding an increasing black-white gap in employment rates. While some may regard in-school employment opportunities of lesser importance, researchers have found that, holding measured characteristics constant, those youths who work during school years have higher employment rates and wages after their school years. This finding may simply reflect that youths who are more motivated (an unmeasured characteristic) both seek work more energetically while in school and seek, find, and perform work better after school, but the possibility cannot be excluded that the in-school work experience per se enhances later employment and earnings. If so, the growing black-white in-school employment gap foreshadows a later out-of-school black-white gap in employment and earnings.

The black-white employment gap for out-of-school youths also grew during this period for both males and females. And this occurred while the previously existing gap between blacks and whites in years of schooling attained was substantially reduced. Given the generally acknowledged positive relationship between years of schooling attained and employment and earnings, this reduction should have narrowed the employment gap between blacks and whites; however, it did not do so, or not sufficiently to offset other factors widening the gap. Research further shows that within this out-of-school group, employment problems (lower chances of getting a job, lower wages when a job is obtained, higher chances of losing a job, longer periods of remaining without a job having lost one) are highly concentrated among minority-group, inner-city, low-income, and high school dropout youths. For those with combinations of these characteristics the problems are compounded. Finally, it is apparent that young unwed mothers have very serious and special problems in qualifying for, finding, and holding jobs, especially at earnings sufficient for their families' economic viability.

Since the end of YEDPA in 1981 the United States has experienced both the deepest recession since the 1930s, which reached its trough in 1983, and a sharp economic recovery. There has also been a notable decline in the absolute size of the youth population since it reached its peak in the early 1980s. It seems reasonable to ask in light of these events if the nature of the youth employment problem has substantially changed, in its general configuration, from what it was in 1978, as outlined above, when YEDPA began. Although exact comparisons cannot be made (comparable data are not yet available), it appears that at the beginning of 1985 the employment problems of youths were of about the same magnitude and configuration as they were in 1978, including racial differentials.

LIMITATIONS OF THIS REVIEW

Our ability to respond to our charge was necessarily constrained by the nature of the material we had to work with. Although we searched the literature available beyond the reports generated as part of the YEDPA process and consulted with people experienced with youth programs and related research, we had to rely almost exclusively on the reports of particular YEDPA youth demonstration projects to assess the effectiveness of youth programs. The exceptions were studies of three programs that began before YEDPA, the Job Corps, the Summer Youth Employment Program, and Supported Work.

We have attempted to test the individual YEDPA research reports against reasonable standards of scientific quality with respect to both the data collected and the methods used to measure program effects. The reports that met such standards were not necessarily evenly distributed over the range of youth programs and target groups. Thus we could not address certain issues with respect to the role and effectiveness of youth employment and training programs because of a lack of reliable evidence.

Since we were always in the position of examining these programs through the lens of their respective research reports, it is important that we clearly distinguish between the quality of the research and the (sometimes unobservable) quality of the programs themselves. In some instances we found reliable evidence, both positive and negative, from which to draw conclusions; in other instances the available evidence was not sufficiently reliable for us to draw any conclusion, one way or the other. Readers should be careful not to confuse a conclusion about the failure of research to provide adequate evidence with a conclusion that a particular program, itself, was ineffective or failed in some manner. A conclusion of *non*effectiveness requires evidence, just as a conclusion of effectiveness does. In the absence of reliable evidence, no inference is possible.

In addition to the above limitations, our ability to draw firm conclusions was further constrained by two conditions that affected the implementation of YEDPA and, particularly, the conduct of the research. First, YEDPA programs and research were mounted in considerable haste and in a period in which many other employment and training and research efforts were going on, so that both program and research resources were stretched very thin. (There are a few notable exceptions to this generalization, e.g., Job Corps and Supported Work.) Second, with the change of administration in 1981, less than 3 years after YEDPA's quick start-up and troubled implementation, both programs and evaluation efforts were abruptly halted.

As a consequence of these two factors, most of the data on which evaluations were based, again with a few notable exceptions, were gathered at a stage at which programs had not been stabilized. As a further consequence, relatively few program evaluations provide data for long postprogram periods: virtually all of the YEDPA project evaluations had only 3- to 8-month postprogram follow-ups. Only two evaluations had as long as a 3-year follow-up (Job Corps and Supported Work). Our review suggests that longer-term follow-ups are important in determining the time pattern of program effects, some of which decay rapidly and some of which emerge slowly.

Further limiting our ability to draw firm conclusions were the serious problems of researchers in creating reasonable comparison groups and preventing sample attrition over waves of the data collection. These problems sharply reduced the number of studies we could review and put in question the reliability of the results of several others.

As a result of these limitations, our coverage of YEDPA programs is uneven and not necessarily representative of overall youth program activity during that period. In many cases conclusions about the effects of specific types of programs are based on only one or two evaluations, in other cases there is no reliable evidence for any conclusion of program effect. In addition, the quality of evidence varies, sometimes supporting strong conclusions, sometimes merely suggesting the direction of program effects. In presenting our conclusions, therefore, we try to indicate the source of the evidence and the degree of its reliability, and we distinguish lack of reliable evidence from lack of evidence per se.

A final limitation of this review concerns the very magnitude of YEDPA and Comprehensive Employment and Training Act (CETA) programs from 1977 through 1981. It has been estimated that in 1979 as much as two-fifths of all jobs held by black teenagers were in government employment and training programs. Thus, even when comparison groups were reasonably created, there may well have been substantial amounts of employment, training, and related effects from federal programs among the comparison group members. To the degree this problem is serious and undetected in the evaluation data, the participant-comparison contrasts will underestimate the impact of the programs.

FINDINGS AND CONCLUSIONS ON PROGRAM IMPLEMENTATION

The conditions under which YEDPA was implemented severely constrained both the potential effectiveness of the programs themselves in reaching their objectives and the related research and demonstration activities that sought to evaluate program effects and to create a reliable knowledge base for future youth programs. Implementation was affected by: (1) the size and implicit duality of the YEDPA service-research mandate; (2) the congressional and executive time schedules imposed on YEDPA program operations and research results; and (3) the instability of the service delivery system due to fluctuations in employment and training policy, regulations, and funding levels. The combination of these three factors was significant in determining the course of YEDPA at both the national and local levels.

The duality of the YEDPA mandate, which was inherent in the enabling legislation, stemmed from the charge to mount new and very large service delivery programs quickly and at the same time to design and conduct comprehensive research and evaluation. Either of these tasks by itself would have been a sizable and complex endeavor; taken together they burdened the system not only by their sheer magnitude, but by their diversity of purpose, at times pitting the interests of program delivery against those of research and knowledge development.

The imposition of two consecutive time limits also constrained the implementation of YEDPA programs and research. The first, imposed by the legislation itself, required that YEDPA be sufficiently operational within 1 year of passage to warrant congressional reauthorization; and the second, imposed by the executive office, required that within 2 years the results of YEDPA program research be adequate to inform the Vice President's Task Force on Youth Employment for its subsequent report to Congress. These limits put tremendous pressure on the national office of the Department of Labor to get both the programs and the research under way immediately and foreshortened the time available for careful planning of either the programs or the research on their effects.

The third major factor constraining YEDPA was one that overrides YEDPA itself, and of which, in fact, YEDPA is a prime example: the tremendous fluctuations from one administration to the next, and often from one fiscal year to the next, in employment and training policy, regulations, and most importantly, funding levels. This instability, perhaps more than any other factor, undermined the employment and training system, particularly at the local level, where in response to such changes adjustments in all aspects of program operations ultimately have to be made. Such fluctuations precluded a more stable and orderly development and institutionalization of the youth employment system. Given the instability of the employment and training system, together with the implementation requirements of YEDPA, it was somewhat unrealistic to expect that within 3 years these programs would be fully operational and ready to prove their effectiveness.

> CONCLUSION: The YEDPA legislation created a program that combined too short a time schedule with too many different program elements and objectives. The demand to quickly implement the full range of elements impaired the quality of many of the programs. In addition, the pressure to obtain a wide range of research results on those programs within a short time compounded the problem and resulted, in many cases, in poor research on hastily constructed programs. It may be that the lack of proven effectiveness of many programs is due as much to the instability of the system as to the inherent nature of the programs.

National Office Management of YEDPA

The tasks of designing and implementing YEDPA programs and research activities strained the capacity of DOL's Office of Youth Programs (OYP) given its very small staff and limited research capability. In response to these demands OYP created a system of indirect management, delegating substantial responsibility for the design, implementation, management, and evaluation of major YEDPA demonstration programs to private nonprofit intermediary organizations. In addition OYP extended the staff's research capability through agreements with other research units within the Department of Labor, with the Educational Testing Service (ETS), and with Brandeis University's Center for Employment and Income Studies (CEIS). Agreements with other federal agencies to operate other portions of YEDPA were another means of expanding the YEDPA management structure.

As a means of quickly disbursing funds and implementing programs under severe time constraints, the agreements with other parties were expedient. As a means of managing programs and research, however, that approach was not very effective. Of the four intermediary organizations, only two, the Manpower Demonstration Research Corporation (MDRC) and the Corporation for Public/Private Ventures (CPPV), produced competent research on program impacts on participants. The results of programs operated by the other two intermediaries, the Corporation for Youth Enterprises (CYE) and Youthwork, organizations created to manage YEDPA demonstrations, are largely unknown because those organizations, although they did produce reports, did not attempt to assess program impact in a quantitative manner that could be evaluated. The results of programs operated under interagency agreements are also unknown either because no program research was conducted or because research reports failed to meet our criteria of scientific evidence. In general, considering the amount of YEDPA funds channeled through intermediaries and interagency agreements, remarkably little is known about the programs or their results.

The results of OYP's other agreements were also mixed. Agreements with other ETA research units to incorporate a youth sample in the National Longitudinal Survey (NLS) and YEDPA samples in the Continuous Longitudinal Manpower Survey (CLMS) data bases produced useful results. The agreement with the Educational Testing Service to establish a large national data base on YEDPA programs and participants, however, was poorly planned and implemented. The support provided by the Center for Employment and Income Studies was effective in documenting and assessing YEDPA programs, but CEIS's technical assistance and oversight of YEDPA research were not--and given the scale of the task, could not have been--sufficient to ensure the comprehensiveness of its research design or the quality of its execution, at least as evidenced by our review.

> CONCLUSION: The resources provided to the Office of Youth Programs were woefully insufficient to its charge to mount and manage YEDPA programs and research. Lacking research staff and resources, OYP delegated responsibility for the design and evaluation of large portions of the YEDPA demonstration research agenda to parties outside the Department of Labor. The resulting management structure lacked sufficient control at the center to provide coherence in program objectives and policies, to monitor developments, and to ensure accountability.

These conditions had their greatest impact at the local level. With its additional reporting requirements, increased federal control over program design and target groups, increased services to youths, and the demands of research and demonstration, YEDPA imposed substantial administrative burdens on local prime sponsors. The competing demands of a substantially increased Public Service Employment Program and the regular programs under the Comprehensive Employment and Training Act (CETA) placed YEDPA in a strained local environment.

The demands of the YEDPA agenda and the time schedule for their implementation severely hampered local program planning and assembly. The increased federal program requirements compressed the already shortened planning and approval process, which was complicated by the lack of clear guidance from the national office. To the extent that these conditions interfered with the careful planning of services, selection of program operators, coordination with other parties in the local service delivery network, identification and recruitment of participants, and assessment of local need for these programs, there were consequences for each subsequent stage of program operations and, ultimately, for the success of the programs.

Despite these problems, YEDPA did succeed in mounting new programs, at double the size of previous youth programs, and in providing large numbers of disadvantaged youths with jobs. Furthermore, the evidence indicates that those jobs were generally well supervised and worthwhile experiences for both the participants and their employers.

Targeting, Recruiting, and Retaining Youths

Research on YEDPA programs cites numerous problems with targeting and recruiting sufficient numbers of eligible youths from the designated target groups: in-school and out-of-school youths meeting criteria of economic disadvantage. This problem was attributed in part to the short planning time and the resulting tendency of prime sponsors to base needs assessments on outdated information and to overestimate target group size. In addition, a legislative requirement that youths in regular CETA programs be served at the same levels as previously and the strict eligibility requirements for some YEDPA programs may have resulted in a shortage of eligible youths in some local areas.

A related problem cited in many reports was the tendency of program operators to serve the least disadvantaged of the eligible youths, leaving the most disadvantaged and needy without services. This phenomenon, known as "creaming," reflects the tradeoff that many program operators perceived between serving those most in need versus those more likely to succeed. It raises both equity and efficiency issues to the extent that the less disadvantaged might have achieved the same employment results without benefit of the programs.

An example of this tradeoff, and one representing a major dilemma for YEDPA, was the targeting of services for dropout versus in-school youths. An inherent tendency of many YEDPA programs was to gravitate to the in-school population. A 22 percent YEDPA set-aside for linkages with the schools was an additional incentive for local prime sponsors to target in-school youths. The dilemma was that the group most in need of employment services--the dropout population--was also the group that was hardest to recruit and to serve successfully. Conversely, the group most easily recruited and served--the in-school population--was the group for which services were less critical (or at least for whom the problem was less clearly defined).

Though it is widely recognized that of all youth employment problems those of school dropouts are the most serious, there appears to be a tendency for employment and training programs to avoid serving this group. Many programs designed specifically to serve dropouts (either through school-conditioned work or through alternative education, training, or work settings) often had difficulties recruiting them and, once they were recruited, experienced difficulties retaining them in the programs. Other projects designed to serve either in-school or out-of-school youths, facing similar difficulties, evolved toward serving in-school youths, recasting the dropout problem in terms of prevention instead of remediation.

CONCLUSION: In meeting the increased enrollment and rapid implementation requirements of YEDPA, prime sponsors when given the option of serving either in-school or out-of-school youths tended to focus resources on the in-school population. Even when programs were specifically targeted to dropouts, they often had difficulty in recruiting and retaining them. As a result, the question of how to reach and serve dropout youths effectively was largely unanswered by YEDPA.

Enrollment of Young Women

Most of the youth programs we reviewed enrolled substantial numbers of young women, and evidence from some programs suggests more positive effects for young women than for young men. Many of the programs, however, encountered difficulties maintaining enrollment of economically disadvantaged young women, apparently because of the high incidence of teenage pregnancy and childbearing. Most program operators and evaluators apparently overlooked this characteristic of the target population, and so there is little direct evidence on the effect of pregnancy and childbearing on program participation or on the effect of program participation on subsequent pregnancy and childbearing.

Evidence from one demonstration program designed to serve pregnant and parenting teenagers under the age of 18 (Project Redirection) is equivocal on the effect of a service-coordination strategy in reducing pregnancy and increasing subsequent employment and earnings. Neither is there evidence to date that would allow clear distinctions to be made as to the effects of alternative decisions about pregnancy resolution, i.e., birth, adoption, or abortion, on other program outcomes.

CONCLUSION: Most youth programs had substantial enrollments of young women. Many, especially those serving older teenagers, encountered difficulties maintaining enrollment of economically disadvantaged young women because of the high incidence of childbearing.

FINDINGS AND CONCLUSIONS ON PROGRAM EFFECTIVENESS

Our conclusions are based on a review of 28 programs, including both demonstration projects and regular youth programs. In this review we proceed by type of program and within type of program by target group, out-of-school youths (both dropouts and graduates) or in-school youths.

Occupational Skills Training Programs

Our conclusions on skills training are based on evaluations of only two programs, the residential Job Corps program for out-of-school, mainly dropout, youths and an apprenticeship program for in-school youths.

Occupational Skills Training Programs for Out-of-School Youths: The Job Corps

The Job Corps stands out in our review as a program for which there is strong evidence regarding program effectiveness. The quality of the evaluation reviewed, in terms of sample sizes, comparison group methodology, sample attrition, and the measurement of outcome variables, lends confidence to these conclusions.

The Job Corps is a comprehensive program providing occupational skills training, basic (and remedial) education, counseling, health care, and job placement to youths more disadvantaged than typical participants in youth programs. Although the contribution of each component part of the program is not known, it is clear that as a whole the program has provided positive benefits to participants in terms of employment, earnings, and education.

On average, for up to 3-1/2 years after participation, Job Corps enrollees earned 28 percent more per year ($567 in 1977 dollars) and worked 3 weeks more per year than nonparticipant comparisons. In addition, participation reduced receipt of welfare and unemployment by 2 weeks and 1 week per year, respectively.

> CONCLUSION: Job Corps participation resulted in gains in employment and earnings in the postprogram period and in declines in receipt of welfare and unemployment payments. These positive effects persisted at a relatively stable rate for up to 4 years after youths left the program.

Participation in the Jobs Corps increased the probability that Job Corps enrollees would receive a high school diploma or a General Equivalency Diploma (GED). Specifically, the probability was .24 for participants compared with .05 for comparisons.

> CONCLUSION: Job Corps participation resulted in gains in educational attainment during the program as measured by completion of GEDs.

The Job Corps evaluation measured criminal activity and found that Job Corps participation significantly reduced the criminal activity of participants.

> CONCLUSION: Jobs Corps participation resulted in decreases in criminal activity, as indicated by rates of arrest during program participation and decreases in seriousness of crimes in the postprogram period.

In addition, although the Job Corps by far exceeded the per-participant costs of other youth programs, the benefit-cost analysis indicated a net benefit.

> CONCLUSION: The benefits of Job Corps participation in terms of increased employment and earnings and decreased crime and transfer payments exceeded the costs by a sizable margin ($2,300) per enrollee.

Other Occupational Skills Training Programs

Although there is substantial evidence on the effectiveness of the Job Corps, it is not known which of its several component parts contribute to which effects; how much (if any) is due to the self-selection factors of youths who enroll in the program; or how program components and participant characteristics interact. The residential requirement of the Job Corps, in particular, is untested as a factor in explaining the program's effectiveness and precludes generalizing its results to nonresidential settings. Nonresidential skills training would certainly be less expensive to operate than the Job Corps; however, YEDPA produced no reliable evidence on the effectiveness of occupational skills training provided in a nonresidential setting for out-of-school youths generally or for the severely disadvantaged population of out-of-school youths served by the Job Corps.

Occupational Skills Training Programs for In-School Youths

The committee found few studies of occupational skills training programs operated under YEDPA. This was due, at least in part, to a concern that participants require a sufficiently high level of academic preparation to be able to gain from such training.

We reviewed only one program providing occupational skills training to in-school youths. This program (New Youth Initiatives in Apprenticeship) was designed to prepare high school seniors for registered apprenticeships after graduation.

> CONCLUSION: There is only very limited evidence from YEDPA on the effectiveness of skills training for in-school youths. The only program that provided evidence of reasonable quality showed no effect on participants' postprogram earnings or

employment rates. However, this program was so special in nature and participant characteristics that one would not wish to base general conclusions about skills training for in-school youths on the evidence from this program alone.

Labor Market Preparation Programs

The programs classified as labor market preparation programs in our review were very heterogeneous in terms of their services and activities, but they shared the long-term goal of preparing youths for their future work lives by improving their personal skills, knowledge, and attitudes toward the work place. Activities ranged from career exploration and job search assistance to remedial education and combinations of work experience and classroom training. The programs also varied greatly in intensity and duration, ranging from 5 to 35 hours per week and from 10 weeks to 1 year.

Programs for Out-of-School Youths

Studies of labor market preparation programs serving out-of-school youths tended to provide sounder evidence on program effectiveness than did studies of programs serving in-school youths. In the 3- to 8-month postprogram period, participants often exhibited significantly better employment outcomes than nonparticipants. It is particularly troublesome, however, that the term "out-of-school youths" is used to refer to high school graduates as well as dropouts: the programs providing reliable evidence served varying mixtures of the two groups and did not produce separate analyses of effects. This lack of separate analysis for dropouts and graduates conditions our confidence in the evidence because program outcomes (e.g., employment and earnings, and educational attainment) might be influenced by whether the youths had completed high school.

CONCLUSION: YEDPA programs providing labor market preparation for out-of-school youths resulted in some positive effects on employment in the 3 to 8 months following program participation (Alternative Youth Employment Strategies, the Recruitment and Training Program, Project STEADY). There are no reliable data, however, to determine whether these short-term gains are sustained over the long run or whether such programs had any effects on educational attainment or other goals, such as reduced crime and substance abuse.

Programs for In-School Youths

Some of the reports on in-school programs we reviewed indicated that program operators did not expect to directly affect the youths' postprogram earnings or employment; instead, they concentrated on other program goals, such as improving reading, mathematics skills, work attitudes, and other skills measured by the Standardized Assessment System, a battery of tests developed by the Educational Testing Service. Although numerous programs under YEDPA provided labor market preparation services to in-school youths, the research on the effects of these programs was of low quality. Even for the few research reports of sufficient quality to be reviewed in depth (Opportunities Industrialization Centers of America, National Puerto Rican Forum (NPRF), Project Redirection) each was so seriously flawed in one respect or another that we could draw no conclusions regarding the effects of such in-school labor market preparation programs on employment, earnings, educational attainment, or other goals.

Temporary Jobs Programs

Programs providing temporary subsidized employment have until recently, with the passage of the Job Training Partnership Act (JTPA), been a major focus of employment and training policy for youths. The objectives of these programs were to solve the immediate employment (and income) needs of disadvantaged youths and to provide them with work experience which would be a basis of future employment. In addition, under YEDPA a major thrust was the testing of an entitlement to subsidized jobs for economically disadvantaged youths (Youth Incentive Entitlement Pilot Projects), which was designed to encourage them to remain in or return to school.

Programs for Out-of-School Youths

Two subsidized jobs programs operated under YEDPA, Ventures in Community Improvement (VICI) and Supported Work, showed that participants experienced increased employment and earnings during the program compared with a similar group of nonparticipants.

> CONCLUSION: Temporary jobs programs for out-of-school youths that were operated during the YEDPA period were effective in increasing participants' employment and earnings during the period of program participation.

The types of subsidized job opportunities provided in YEDPA demonstration programs varied widely. Most, as required under CETA, were in the public sector. YEDPA, however, for the first time allowed work experience placements in private for-profit businesses. Evidence from the Public Versus Private Sector Jobs Demonstration Project tentatively indicates that while it was possible to create subsidized employment in the private sector, substantially more effort was required to do so. This finding is not surprising considering the lack of experience of prime sponsors in developing private sector jobs and the lack of experience of the employers in working with government-sponsored programs. Evaluations of Supported Work and VICI programs indicate that jobs provided were often of high quality and produced output that was of value to the employing agency and to society in general.

CONCLUSION: Subsidized jobs programs for out-of-school youths can be effectively operated in the public and private sectors, though substantially more effort is required to enlist private sector employers. Such jobs need not be "make-work" but can provide output of positive social and economic value.

Probably the most important goal of temporary jobs programs for out-of-school youths is to provide an experience that will raise the postprogram employment and earnings of participants over what they would have been without that experience. Unfortunately, the only evidence on this issue that we found reliable was that for Supported Work. The Supported Work program served a severely disadvantaged segment of dropout youths and, therefore, the degree to which its findings can be generalized to the wider out-of-school youth population is not known. However, the long postprogram follow-up study (15 to 67 months) provided strong evidence of no long-term gains in postprogram employment and earnings.

CONCLUSION: The evaluation of the Supported Work program for severely disadvantaged school dropouts provided strong evidence of no long-term gains in employment and earnings.

In addition to their value as a source of immediate employment and as a bridge to longer-term unsubsidized employment, temporary jobs programs have sometimes been seen as yielding social value in the form of return to school by dropouts or entrance in alternative education (GED) programs or through deterrence of crime and substance (drug and alcohol) abuse. The only temporary jobs program for out-of-school youths reviewed here for which evidence on these measures was found reliable (Supported Work) seemed to have no such effects.

CONCLUSION: A temporary jobs program for severely disadvantaged out-of-school youths (Supported Work) had no effect on educational attainment nor on reducing crime or alcohol and drug abuse.

The entitlement program, which guaranteed jobs for dropouts if they returned to school, provides evidence on the effects of temporary jobs programs on school completion. Its effectiveness is discussed in the next section.

Programs for In-School Youths

Temporary jobs programs for in-school youths under YEDPA were provided to meet the immediate part-time employment needs of school youths both during the school year and in the summer. Like temporary jobs programs for out-of-school youths, the in-school programs we reviewed, i.e., entitlement and the Summer Youth Employment Program (SYEP), were effective in increasing participants' employment and earnings during the period of program participation.

These findings, and the entitlement results in particular, refute the hypothesis that the employment problems of these youths are a function of their high reservation wage (that is, that jobs are available but not sought or filled by these youths because the wages are too low), since large numbers took up these jobs when they were made available through the programs. Overall, the entitlement program significantly reduced unemployment.

There was also some evidence that under such programs jobs of reasonable quality could be provided. As with the out-of-school programs, work experience placements in the private sector were developed, but they required greater effort than public sector placements and resulted in some degree of job substitution and displacement (more in private than in public sector jobs).

> CONCLUSION: Temporary jobs programs for in-school youths operated during the YEDPA period (entitlement and SYEP) were effective in increasing participants' employment and earnings during the period of program participation.

The entitlement program demonstrated the ability of a government program to eliminate black-white employment rate differences among in-school youths. This effect may be viewed by some as contributing to the goal of greater social equity and as of sufficient merit, in itself, to justify the program regardless of other benefits. Others may believe, however, that an important objective of temporary jobs programs, even for in-school youths, is improvement in postprogram employment and earnings.

> CONCLUSION: For one program (entitlement) effects were of sufficient magnitude to eliminate the employment and unemployment differences between black and white youths who were eligible for the program. In addition, there is evidence that these jobs were of reasonable quality.

In the immediate postprogram period observed for the entitlement program (2 months after entitlement ceased operation), there was some evidence of increased weekly earnings of eligible youths. When examined by urban versus rural sites, however, it was apparent that this effect was due largely to the results in the rural Mississippi site.

> CONCLUSION: A major temporary jobs program (entitlement) appears to have been effective in increasing the earnings of eligible youths in the immediate postprogram period, but this effect was dominated by results in one rural site.

Unfortunately, none of the research on the YEDPA temporary jobs programs for in-school youths produced reliable long-term follow-up data that would permit determination of the long-term effects on employment and earnings.

CONCLUSION: YEDPA produced no reliable evidence on the effect of temporary jobs programs on the long-run postprogram employment and earnings of in-school youths.

One of the purposes of temporary jobs programs for in-school youths was to prevent youths from dropping out of school in order to find employment. The entitlement project in fact set school enrollment as an eligibility requirement for a subsidized job and had as a major objective the retention of youths in school. Comparison of school retention rates in entitlement and nonparticipant sites, however, indicates that the program had no effect on school retention. The Summer Youth Employment Program also emphasized return to school as an objective but there are no reliable data on the effect of SYEP on school return or retention.

CONCLUSION: A major program (entitlement) offering temporary jobs to youths on the condition that they remain in school was not effective in increasing school retention.

An express aim of the entitlement program was not only to prevent dropouts but also to encourage those who had already dropped out to return to school by offering them a subsidized part-time job during the school year and a full-time job during the summer, both conditional on continued enrollment in school. This incentive, though it did encourage some dropouts to return to school initially, was ineffective in retaining them--comparison of entitlement and nonparticipant sites indicates no differences in school completion rates.

CONCLUSION: A major program (entitlement) offering temporary jobs to school dropouts on the condition that they return to school did not increase school completion among these youths.

Job Placement Programs

Job placement programs, which provided job search assistance, career information, and job placement to youths, were designed to ease the labor market exchange between potential employees and employers. Such programs were thought to increase employment and earnings of youths through more efficient operation of the labor market. Although job placement was often a component of other more comprehensive programs, the programs considered here offered only job placement. The conclusions drawn, therefore, do not necessarily apply to job placement as a support service in other programs.

Conclusions on the effectiveness of job placement programs for out-of-school youths are based on evaluation of two projects, 70001 and the Job Factory. Conclusions on programs for in-school youths are based on evaluations of Jobs for America's Graduates (JAG) and Jobs for Delaware Graduates (JDG).

Both the clientele and the costs of the programs we reviewed varied widely. Jobs for Delaware Graduates served largely nondisadvantaged, noncollege bound in-school youths and offered no stipends for participation. The 70001 program, funded with YEDPA money, served disadvantaged youths, both in-school and out-of-school, and provided stipends.

In general, the effect of these job placement programs for both in-school and out-of-school youths was to produce short-term increases in the rates of employment and earnings of participants over those of similar youths not receiving such services. There is evidence that these effects lasted for the first year after program participation, decayed, and then disappeared by the end of the second year.

> CONCLUSION: Programs designed to provide job placement assistance to in-school and out-of-school youths were effective in increasing employment for the first year after program participation. This effect decayed gradually and disappeared entirely by 2 years after program completion.

Benefit-Cost Estimates

After a review of the effects of YEDPA programs, it is natural to ask about the efficiency with which the programs achieved those effects. The most rigorous way to formulate a response to this question is in terms of a comprehensive benefit-cost analysis.

In order to make a complete benefit-cost analysis of a program it is necessary, first, to have reliable estimates of the effects of the program and, second, to have an appropriate accounting framework that translates those estimates of effects into benefits and costs. Many of the programs we reviewed lacked the first element and, except for Job Corps and Supported Work (programs that predated YEDPA), even when reliable estimates of effects were available, they were not translated into benefit and cost estimates. For Job Corps and Supported Work, we found the benefit-cost analyses reliable and comprehensive: for Job Corps, the social benefits were found to exceed social costs; for Supported Work, the social costs were found to exceed social benefits. With the exception of two programs (Job Corps and Supported Work), we could not find sufficient reliable evidence to assess the efficiency, in terms of social benefits and social costs, with which youths programs achieved their effects.

FINDINGS AND CONCLUSIONS ON YEDPA RESEARCH

We often found it difficult, as noted above, to reach firm conclusions about the effectiveness of YEDPA programs given the quality of the available evidence. Indeed, the difficulty in making inferences arose largely from the paucity of reliable evidence from the YEDPA research effort. Careful readings even of the few reports that did meet minimal standards of methodological adequacy frequently revealed important flaws in the reported research.

It would be unfortunate, however, to conclude that rigorous research cannot be conducted on youth programs. On the contrary, we found several examples of research studies on youth employment and training programs that provided strong evidence, both positive and negative, on program effectiveness (Job Corps, Supported Work, and Alternative Youth Employment Strategies). These examples indicate that given reasonable time for design and planning, attention to research standards, care in coordinating with program operators and in program implementation and follow-up, good evaluations of employment and training efforts can be executed for both small- and large-scale programs.

While it is relatively easy to point out the methodological problems in YEDPA research programs, it is more difficult to identify their causes. In the interests of improving the quality of future research, we describe below some of the common inadequacies of the YEDPA research effort and some of the conditions that, we believe, contributed to those failings.

There were a wide variety of problems in YEDPA research. Many are obvious and reflect the difficulty of meeting established research standards for complete reporting of research results, documentation of procedures for sample definition, presentation of details of statistical analyses, adequate coverage of the target population in data gathering, and minimal sample attrition. Low rates of initial sample coverage and high rates of sample attrition, for example, were among the most common flaws of the YEDPA research reports we screened. Other problems, however, are less easily resolved and appear to be inherent in public policy research.

Comparison and Control Group Methodology

Difficulties in identifying equivalent comparison or control groups flawed many YEDPA studies. Very few of the studies we reviewed used random assignment to create participant and control groups. A more frequent strategy was to define or construct a comparison group that, except for program participation, was presumed to differ in no important way from the participant group. Differences in measured outcomes were then attributed to the effects of program participation. In some cases, statistical techniques were used to control for measured differences between participants and nonparticipants.

Our review of research that used such constructed comparison groups revealed two basic problems that repeatedly jeopardized the validity of the inferences to be drawn. The most frequent problem was the use of comparison groups that differed markedly in background characteristics from participant groups. Given an adequate theoretical model, differences in measured characteristics can be controlled for statistically. However, when there are substantial differences in measured characteristics one becomes uneasy about the adequacy of the theoretical assumptions and statistical adjustments and is left wondering about major differences in unmeasured characteristics that may be correlated with the outcome measures. A second common problem was the use of treated comparison groups, i.e., groups receiving services similar to those provided to the YEDPA participants but in a different program. Both of these problems undermined the basic purpose of a comparison or control group and made the attribution of program effects questionable. The research reviewed in this report demonstrates the causes for concern about bias in estimated effects from use of such comparison groups. Because of these problems we frequently found that purported evidence of YEDPA program effects might plausibly be ascribed to the nonequivalence of the comparison and participant groups, even when statistical methods to control for such differences were used.

Even in the methodologically sophisticated work conducted on the CLMS data base, there is convincing evidence that the constructed comparison groups that were equated on common socioeconomic variables could differ markedly on important unmeasured variables. The Job Corps evaluation also, despite efforts to correct for biases in the constructed comparison group, was ultimately less convincing in its estimates of effects than would have been the case had random assignment been used.

CONCLUSION: YEDPA research did not make sufficient use of random assignment in defining participant and control groups. Our review of the research on YEDPA shows dramatically that control groups created by random assignment yield research findings about employment and training programs that are far less biased than results based on any other method.

The fact that some studies successfully used random assignment suggests that this procedure is feasible and presents no serious technical difficulties in execution. It is evident that if random assignment had consistently been used in YEDPA research much more would have been learned. (The use of random assignment in public policy research is discussed in Appendix C.)

Measures of Implementation

In a real-world experiment involving a social program one does not have a single, standardized treatment. Hence, evaluation of the outcomes of such social experiments must carefully take into account the nature of the treatment(s) given and variations between the treatments received by different individuals. Without paying attention to matters of implementation one cannot know whether a given program was successfully delivered. If no program approximating that intended by its designers was implemented at a given site, for example, there is no reason to treat the results as a "test" of the outcomes arising from the program. We found that although YEDPA produced several studies of program implementation, YEDPA research gave insufficient consideration to measures of the extent of program implementation in interpreting or qualifying program results.

The YEDPA research plan envisioned gathering a standard set of data about the process of program implementation. This plan included information on the nature of the services offered by different programs and sites, the gearing up and scaling down of operations over time, the turnover of staff, the distribution and magnitudes of program expenditures, and so forth. Unfortunately, this effort was neither well planned nor well executed (see Appendix A).

Length of Follow-up Period

A major shortcoming of theoretical importance in YEDPA research was the very short postprogram period over which outcomes were measured. For most programs, follow-up measures were available only at 3 or 8 months after program completion; Job Corps and Supported Work, with over 3-year follow-ups, were notable exceptions. Given the employment objectives of most YEDPA programs, a more reasonable test would have considered longer-term outcomes.

The Job Corps experience of initial declines in employment and earnings in the first months after termination, followed by significant longer-term gains, suggests that, at least for some programs, additional time may be required for effects to emerge. On the other hand, there are examples (70001 and JAG) indicating that early program effects may decay rapidly. Thus, there is evidence that short-term follow-ups may lead to incorrect inferences, both positive and negative.

> CONCLUSION: For the most part, YEDPA program evaluation research suffered seriously from the lack of outcome data collected over a sufficiently long period following program completion. For some programs it appears that there was never any serious intention to collect data beyond 8 months postprogram; for other programs, the abrupt cutoff of funds in 1981 precluded any attempt at further follow-up. It is clear that the long-term effects of programs cannot be measured when there are no data beyond 8 months. Neither policy makers nor researchers are well served by such truncated evaluation studies.

Use of Subjective Measurements as Proxy Variables

Many YEDPA research projects used subjective measurements, such as measures of work-related attitudes and job-holding skills, as proxies for longer-term outcomes. As with all such measures, the link between the proxy variable (the social attitude or skill) and the unmeasured long-term outcome variable (increased employment and earnings) is subject to empirical verification. It is important to ask how well these variables serve as proxies for the variables of primary interest. (Appendix A reviews the correlations between the subjective measures used as proxies in YEDPA research and measures of employment and earnings variables.) We found that these measurements showed relatively low correlations with the objective variables for which they were intended to serve as proxies and that the reliability of these YEDPA measurements was rather low. Furthermore, an earlier analysis of data on the same measures collected prior to the 3- and 8-month data collection periods was predictive of these low correlations and reliabilities.

CONCLUSION: YEDPA evaluations invested large amounts of resources in measurement of proxy variables rather than the real variables that were the goals of the programs. Moreover, most of these were subjective measures known to have only modest levels of association with the objective outcomes that were the implicit long-term goals of the YEDPA programs--future employment and earnings.

Sample Undercoverage and Attrition

Sample undercoverage and sample attrition were two of the most critical and frequent problems with YEDPA research. Indeed, attrition between waves of a study was second only to lack of impact data as a reason for excluding reports from our review. In addition, over the range of YEDPA programs covered by the Standardized Assessment System, it is estimated that data were gathered from less than half of the target sample. This undercoverage makes it impossible to generalize to the total population of participants in YEDPA demonstration projects unless one makes highly unrealistic assumptions, for example, that nonresponders were a random sample of program participants.

CONCLUSION: Many YEDPA research projects gave inadequate attention to sample design and execution, including defining the sampled population, obtaining data from all members of the target sample, and preventing sample attrition between waves of the longitudinal data gathering.

It is important that the foregoing catalog of problems with YEDPA research not lead readers to the despairing conclusion that such problems are unavoidable for all evaluation research in the employment and training field. We found that these problems were not predestined by the nature of the questions being posed, but rather were caused by the demands of Congress for research results and the failure of the researchers to recognize the limits imposed by YEDPA conditions and scale the research accordingly. The research tools available are adequate to the task, but suitable conditions for their use must be provided. These conditions include adequate time for design and execution of the research, reasonable stability of the programs being evaluated, provision of adequate resources for the research, and a political commitment on the part of those commissioning the research to allow adequate time not only for careful planning at the beginning, but also for enough time at the end to see the research through to its conclusion and to obtain the full benefits.

OVERALL CONCLUSIONS: DID YEDPA ACHIEVE ITS GOALS?

The YEDPA legislation had four major objectives that broadly defined its scope: (1) to address the immediate employment needs of youths through job creation efforts; (2) to conduct research and demonstration as a means of identifying methods of dealing with the structural employment problems of youths; (3) to involve other agencies, nationally and locally, in the planning and delivery of youth employment services as a means of exploring the effectiveness of alternative service delivery mechanisms; and (4) to increase cooperation between the schools and the employment and training system as a means of addressing the problems of disadvantaged youths. We present here our conclusions on the extent to which these objectives were met.

Job Creation

A key objective of YEDPA, the one on which the most funds were spent, was providing young people with jobs. In response to high youth unemployment in the 1970s, federal outlays for youths in the first year of YEDPA doubled what they had been, and in its course YEDPA served over 6 million youths. Previous efforts at large-scale jobs programs (SYEP and Public Service Employment) were widely criticized for their poor administration and poor job quality (U.S. General Accounting Office, 1979). Evaluations of massive jobs programs under YEDPA (SYEP and entitlement) showed major improvements in job supervision and job quality. There is evidence not only that very large numbers of jobs were provided to youths under YEDPA, but also that the quality of the jobs was more than "make-work."

CONCLUSION: A major achievement of YEDPA was that it succeeded in providing large numbers of disadvantaged youths with jobs that were more than make-work. YEDPA demonstrated the capacity of the employment and training system to mount and run large-scale jobs programs for young people.

Research and Demonstration

Although the employment and training system under YEDPA was able to demonstrate its capacity for implementation and operation of large-scale programs, it was hampered in its response to its second major objective--conducting research and demonstration aimed at solving the structural employment problems of youths. Our review suggests that the institutional capacity for research and demonstration was insufficient to the objectives of YEDPA knowledge development. The knowledge development agenda itself was too ambitious given the rapid time schedule of YEDPA and the other demands of large jobs programs. In terms of the results of YEDPA research, the youth employment situation today is not very different from what it was before YEDPA began.

> CONCLUSION: Rapid program expansion in a period of considerable social program activity severely hampered the planning, implementation, and evaluation of YEDPA demonstration research. The abrupt halt of research activity in 1981 did not help. As a result, despite the magnitude of the resources ostensibly devoted to the objectives of research and demonstration, there is little reliable information on the effectiveness of the programs in solving youth employment problems.

Developing the System

The youth employment and training system has long suffered from its isolation from major economic and educational institutions. This isolation is due to a number of factors, most importantly the character of its client population and its lack of a stable institutional base. The YEDPA legislation required the involvement of private employers, the schools, and other established agencies, both public and private, in planning and delivering youth services in order to explore alternative mechanisms for more effective service delivery and to encourage the integration of employment and training services into the mainstream of the society.

Our review of numerous reports on program effectiveness and implementation suggests that although the involvement of these parties was effective in making better use of local resources, it complicated the planning and delivery process and did not on the whole achieve its goals of improving service delivery and integrating either the programs or their participants into the larger society.

Given the nature of the youth employment problem, the goals of equity and efficiency argue for targeting services to disadvantaged youths. At the same time, however, our review suggests that the youth employment and training system continues to suffer from a marginal status that is due in part to such targeting.

> CONCLUSION: Despite YEDPA efforts to improve the service delivery system, employment and training services for youths remain economically, socially, and racially isolated from the larger society and its institutions. This isolation has stigmatized the programs and undercut their ability to recruit staff, motivate participants, and involve employers.

The Schools and School Dropouts

The YEDPA requirement that 22 percent of the funds for YETP be set aside for programs coordinated with the local school system was an attempt to influence the schools to broaden their constituency to include disadvantaged youths. Despite the agreements negotiated under YEDPA to involve the schools in youth employment programs, we found little evidence of successful mutual efforts.

CONCLUSION: The relationship between the employment and training system and the school system remains problematic. Despite some common objectives and client groups and efforts to bring the two systems together in the service of those objectives and clients, they remain largely separate, and the potential benefits of mutual efforts are largely unrealized.

An example of this problem, and one of great importance to this committee, is the problem of school dropouts--a group of legitimate concern to both the schools and the employment and training system and a group that neither has been able to serve effectively. No other youth group faces the employment problems, both immediate and long term, faced by school dropouts, and particularly those who are minority group members.

The YEDPA approach to the dropout problem was twofold: (1) prevention of the problem by targeting services to youths at risk of dropping out and giving them incentives to remain in school and (2) remediation of the problem by targeting services directly to dropouts in a way that encouraged return to school or an alternative education. Our review of youth programs found no evidence of effective means of either dropout prevention or remediation. We observed instead the severe problems of schools and other program operators in recruiting and retaining dropout youths and the tendency of those programs to focus their services on the more easily recruited and served population of in-school youths.

CONCLUSION: Of all youth groups, school dropouts face the most serious employment problems. Because of problems in recruiting and serving dropouts, however, the focus of youth research and demonstration under YEDPA was unduly directed to in-school youths and high school graduates. As a result, the question of how to reach and serve dropout youths remains unanswered.

IMPLICATIONS AND RECOMMENDATIONS

Two basic issues--the problem of school dropouts and the relations between the schools and the employment and training system--remain, in the committee's view, fundamental dilemmas confronting the youth employment and training system in the United States. We begin our discussion of implications with our recommendations for future youth policy with regard to dropouts.

We recognize that there is a long history of research and program attempts to understand and deal with the problems of school dropouts. And yet, as our review strongly suggests, dropouts, particularly minority group dropouts, remain as the segment of the youth population with the most serious employment problems. Attempts, both preventive and remediative, to address the employment problems of this group, with the exception of the Job Corps, have been ineffective. Despite these efforts we know little more about dropouts now than we did before YEDPA, not only in terms of their responses to employment and training programs, but more fundamentally in terms of the factors--economic, social, and psychological--affecting their dropout and subsequent educational and employment behaviors.

> RECOMMENDATION: The committee strongly recommends that school dropouts be given priority status for employment and training programs and research. Program efforts should be shaped to test systematically the alternative methods of addressing the education and employment needs of these youths, and research should focus on the underlying determinants of the dropout phenomenon.

Another major implication of our review concerns the marginal role of the youth employment and training system, its relation to the school system, and the two systems' relation to the broader society in addressing youths' educational and employment needs. We recognize the inherent tension between the above recommendation to give priority status to dropouts and the suggestion that the employment and training system, partly because of such targeting of services, has isolated itself from the broader society. This is a complex problem to which we have no solution. We believe, however, that it is an important aspect of the youth employment problem and that it bears serious consideration and further study.

> RECOMMENDATION: In order to rid employment and training programs of the stigma which has plagued them and their participants, the committee strongly recommends that attempts be made to target services for disadvantaged youths in ways that will not isolate them but rather integrate them into mainstream institutions and activities. The role of the school system and the relation between the schools and the youth employment and training system are critical in resolving this problem. The committee therefore recommends a direct study of the appropriate role of the youth employment and training system, and its relation to the educational system, in alleviating the employment problems of those youths most in need of assistance.

Youth Programs

Committees such as ours invariably recommend further program research and testing. Unless the problems addressed by the programs have disappeared or been substantially ameliorated or unless social priorities have shifted sharply, such recommendations should in good conscience be made. We are hesitant, however, to prescribe program approaches and techniques as lessons from experience. In our considered judgment, the clearest lesson from the YEDPA experience concerning effective programs is that much remains to be learned about dealing with youth employment problems. In our judgment, it is better by far to admit that knowledge is lacking than to assume on the basis of scant knowledge that we know what works best for whom. Therefore, our recommendations on programs and program research are closely tied to the evidence we reviewed. In this section we first present our program recommendations for out-of-school youths, then for in-school youths, and finally for programs serving women.

Programs for Out-of-School Youths

The results of our review and the present conditions of the new Job Training Partnership Act (enacted in 1982) suggest the following program areas for research for out-of-school, dropout youths: basic remedial education, occupational skills training, and financial assistance.

Basic Education Although there is no evidence on the effect of labor market preparation programs on basic skills acquisition, there is evidence from the Job Corps and 70001 that programs placing a strong emphasis on GED training can substantially increase the educational attainment of out-of-school youths, as measured by GED attainment.

> RECOMMENDATION: The importance of basic education as a component of programs for out-of-school youths should be tested systematically. Many programs have placed heavy emphasis on the attainment of a GED (or other educational interventions such as competency-based instruction) for this group and a serious attempt should be made to determine whether the increase in basic education provided through programs does in fact have long-term payoffs for these youths.

Occupational Skills Training The results of the Job Corps evaluation suggest that occupational skills training programs can be an effective means of solving some of the structural employment problems of disadvantaged out-of-school youths, at least of that population of disadvantaged dropout youths served in residential Job Corps centers. The fact that the research to date has not explained the Job Corps' effects in terms of the individual contribution of its many program components or the totality of its residential services, limits the generalizability of the results to other disadvantaged youths in other settings.

> RECOMMENDATION: Opportunities to enroll in the Job Corps should continue to be provided for the out-of-school youth population.

> RECOMMENDATION: The effectiveness of the Job Corps should be further studied through systematic evaluations using random assignment. These evaluations should attempt not only to assess the overall effectiveness of the program but also to determine which components of the program are most effective for which groups of youths. Attainment of this latter objective will require some use of random assignment to alternative components within the Job Corps program.
> RECOMMENDATION: Nonresidential skills training programs for out-of-school youths should be systematically tested and evaluated.

Financial Assistance There is a serious question of whether employment and training programs can effectively enroll the out-of-school youths most seriously in need of assistance and hold them in the program for a reasonable amount of time without providing some form of financial assistance. In our review we found no good evidence on this question.

> RECOMMENDATION: An attempt should be made to test how the number and characteristics of those enrolled in youth employment programs are affected by the provision of financial assistance and whether the length of participation varies according to whether assistance is provided.

Programs for In-School Youths

General research, sponsored in part by YEDPA, highlighted two important facts regarding in-school youths and employment. First, in the last few decades, employment for in-school youths has grown substantially for white youths while black in-school youths have not experienced a similar growth in employment (and for black males the extent of employment while in school actually declined). Second, there is a high correlation between employment while in school and employment and earnings after school.

The second point is recognized to be correlational and possibly not causal, but it raises the question of whether providing the means for increasing employment while in-school would reduce the incidence of employment problems after school. The entitlement program provided the potential to give this hypothesis a meaningful test, but that potential could not be fully realized. The entitlement program did show, however, that meaningful, minimum-wage jobs could be provided and that youths would take the jobs in sufficient numbers to change the relative black-white in-school employment rates. Given this step, it seems eminently worthwhile to test the hypothesis further.

A test of the effects of in-school employment on later employment need not, however, necessarily come in the form of an entitlement-type program. Indeed, in terms of testing for the effects of such an experience, the research inferences can be more powerful if access to the job experience is provided through random assignment of individuals to either the program or to a control group. Even with random assignment to a limited number of part-time jobs for in-school youths during the school year, if the program is focused on those areas where ethnic differentials in employment of in-school youths are high, the results of the test programs would provide evidence as to whether a narrowing of in-school employment differentials will lead to a subsequent narrowing of postschool employment differentials.

> RECOMMENDATION: Programs should be designed to test whether increased in-school employment leads to greater postschool employment. The tests should be conducted in a form that requires random assignment of individuals to the program or a control group. The evaluation of the test programs should provide sufficiently long-term follow-up data for both participants and control group members to determine long-term postschool effects.

The Summer Youth Employment Program seems to have sufficient political popularity to survive regardless of evaluation research findings or nonfindings. Therefore, attempts should be made to restructure segments of SYEP to provide an opportunity to learn more about whether its resources can be used more effectively.

> RECOMMENDATION: Attempts should be made to restructure some elements of the Summer Youth Employment Program to systematically test whether SYEP elements can be used to enhance basic education sufficiently to reduce school dropout rates or, at least, improve employment chances for those who do drop out anyway. Elements of SYEP could be structured so some skills training is added to the pure work experience in order to determine whether such training enhances the long-term employment effects of the program.

Women in Youth Employment Programs

Although women constitute half of the participants in employment and training programs, little attention has been given to sex differences either in terms of program needs or outcomes. Yet it is clear that the distinct needs and characteristics of this group have implications for program design.

> RECOMMENDATION: Programs should be designed to recognize more fully the fact that teenage parenthood often results in restricting the educational, training, and employment opportunities of young women. The benefits of providing child care to encourage greater participation of teenage mothers and more favorable program outcomes should be rigorously tested.

In addition, while there is some indication that women benefit more from participation in employment and training programs than men, there is also evidence that such programs may perpetuate occupational segregation.

RECOMMENDATION: More research should be done on selective factors that affect the recruitment of women into youth employment programs and the differential treatment by sex in occupational training once in programs. More research is also required on potential nonemployment outcomes of job training for women, such as increased educational attainment, reduced welfare dependency, and reduced early childbearing.

A General Research Strategy Under JTPA

Having made a series of recommendations regarding types of programs which might be tested, we must hasten to state that we are fully aware of the changed environment in which employment and training programs currently operate under the Job Training Partnership Act (JTPA). Recommendations for demonstrations and research must be framed in light of that environment.

When considering JTPA from the perspective which has been the primary concern of this committee, three features stand out:

1. The resources devoted to employment and training are considerably less than those devoted to YEDPA even though the magnitude of the youth employment problem is at least as great today as it was in the year preceding YEDPA.
2. The continued concern with the employment problems of youths is indicated by the fact that a substantial proportion of the greatly reduced training resources are earmarked for programs enrolling youths.
3. The control of the content of programs and any research to be done concerning them is placed almost completely in the hands of the local Private Industry Councils and Service Delivery Areas (and the state agencies guiding them).

In light of these features, we must ask what is likely to be learned from JTPA about how to alleviate the employment problems of youths, "what works for whom" among the youth population. Our answer must, in all honesty, be "very little." The YEDPA experience amply demonstrates that completely decentralized research efforts executed with a minimum of central coordination and technical assistance are likely to yield very little hard evidence on program effectiveness.

On the other hand, the very fact that there is a considerable reduction in program activity in the field may create an opportunity for more careful planning and execution of evaluation research than was possible under YEDPA and a greater likelihood of finding the sort of research resources which will generate evidence of high quality. We believe that with relatively small amounts of central resources, a strategy and mechanism for evaluation research under JTPA can be implemented which will considerably enhance the likelihood that reliable evidence on youth programs will be derived from JTPA.

The strategy would be to provide through some central mechanism the research designs and technical assistance that would be necessary to add evaluation components to youth programs being underwritten by local Private Industry Councils (PICs) and Service Delivery Areas (SDAs) through JTPA. Adding a small amount of program funds, allocated on a discretionary basis to those PICs and SDAs that agree to cooperate, might induce the localities to make the slight alterations in their program content or procedures necessary for evaluation research.

The central agency would have the overall perspective the local PICs and SDAs may lack as to the range of program types that are being undertaken in various localities and would ensure that a reasonable portfolio of quality evaluations was being mounted so that the relative effectiveness of different program types could be assessed. Having this perspective would also enable the central agency to provide information and technical assistance to the local PICs and SDAs concerning alternative program types, better program procedures, and so on. The central agency would also help to ensure that at least a central core of the evaluation research information collected across sites was reasonably comparable so that cross-program comparisons could eventually be made.

The central agency need not be in the federal government itself. The experience with the use of intermediary organizations to organize research and technical assistance under YEDPA, while it was not all positive, was sufficiently good in a number of cases to suggest that this might be an effective medium through which to interject this evaluation research into the JTPA framework. Such organizations now have experience in negotiating with local operating agencies, adapting research designs to local constraints, and combining technical assistance with research guidance. While the major activity could be carried out through an intermediary, some guidance and oversight from the Department of Labor is necessary, as we noted in our earlier discussion of YEDPA; it is not wise to devolve responsibility totally to an intermediary. But with a level of research and evaluation activity that would be only a small fraction of that undertaken under YEDPA, the Department of Labor staff required to oversee intermediaries' activities could be quite small.

We note also that good evaluative research could provide a sounder basis for the setting of performance standards, a key feature of JTPA. What is important for performance is value added, the improvement in employment and earnings over what it would have been in the absence of the program, and we would argue that this can best (and perhaps only) be established through evaluation research using randomly assigned control groups.

These then are just the rough outlines of a strategy and mechanism for evaluation research on youth programs under JTPA. We believe they are compatible with the basic design of JTPA itself and could yield good evidence from the JTPA experience about how an employment and training system can better help alleviate the continuing serious employment problems of sizable proportions of our youths. We must stress that in the absence of such a strategy and mechanism, we believe that several years from now the nation will find itself with several years of JTPA experience but knowing little more about whether or how such programs might help reduce youth employment problems.

Research Methods

Beyond the general strategy and mechanism just suggested for research and demonstrations under JTPA to test the types of program components we have recommended, we have specific recommendations to make about the actual conduct of research and evaluation activities.

The results of our review of YEDPA programs make it obvious that quality in the design and execution of a research project affects the quality of the data and the reliability of any conclusions that are drawn from those data. Poor research designs can make programs look worse than they are, or better than they are, or yield uninterpretable evidence. Poor execution will compromise even the best design.

Random Assignment

Our review of YEDPA research strongly suggests that much more could have been learned, and more confidence placed in the results, if random assignment had more frequently been used. We believe that not only has the feasibility of random assignment in program research been demonstrated, but that in situations in which program resources are scarce and program effectiveness unproven, it is ethical (see Appendix C).

> RECOMMENDATION: Future advances in field research on the efficacy of employment and training programs will require a more conscious commitment to research strategies using random assignment. Randomized experiments should be explicitly authorized as a device for estimating the effects of new projects, program variations, and program components. Furthermore, funding authorities should back this explicit authorization with firm indications that this is the method of evaluation which is expected.

Implementation Research

The need for measurement of program implementation in evaluation research is clear. It is as important in social program evaluation as is measurement of dose level in evaluating new drugs. Federal agencies have had substantial experience in eliciting such information, but this information has not always been reasonable in quality, judging from our review of youth employment program evaluations.

> RECOMMENDATION: Systematic and verifiable information on program implementation should be collected in future research. Better and less expensive methods for obtaining and reporting such information need to be developed.

Use of Subjective Measurements as Proxy Variables

While one cannot fault a research program for using subjective measurements as proxies for other outcomes, it is a theoretical and methodological challenge to develop measures that have substantial validity and reliability. Indeed, the treatment of subjective measurements has been reconsidered in recent years, and it is generally recognized that common research practices ignore the complexity of the relationships between objective and subjective measurements.

> RECOMMENDATION: Future researchers should avoid overreliance on subjective measures of program outcomes and devote more resources to studying the relationships that exist between subjective indicators and key objective outcome variables.

Postprogram Follow-up

The Job Corps evaluations suggest that some program effects that are not apparent at short-term follow-ups may emerge in the longer term. Research on job placement programs suggests that some, more immediate, postprogram effects may decay rapidly. Together, these pieces of evidence suggest that short-term follow-up data may err either positively or negatively in predicting longer-term program effects.

> RECOMMENDATION: Future research on the effectiveness of youth employment and training programs should, at least in selected studies, estimate the longer-term effects of these programs by collecting follow-up data for at least 2 years postprogram.

Benefit-Cost Studies

When evaluations demonstrate that programs have a positive outcome, researchers should recognize that the next question raised will be whether this positive outcome was worth what it cost to produce it. Thus evaluators should anticipate the eventual need for benefit-cost studies. Such studies, however, need not be a component of every evaluation nor of entire programs, since doing adequate benefit-cost studies is both difficult and costly.

The Job Training Longitudinal Survey Data Base

One feature of JTPA that is important in regard to program research is the plan to rely heavily on analysis of national data bases to determine the effectiveness of JTPA programs. Present plans are to model the Job Training Longitudinal Survey (JTLS) data base after the previous CLMS. Although its data gathering appeared technically excellent, the CLMS strategy of using nonrandom comparison groups for program evaluation suffered from substantial problems with potential unmeasured biases in its comparison groups. Furthermore, we believe that the plan to use the same strategy in designing the JTLS as a means of obtaining evidence on "what works for whom" is misguided. The evaluations we reviewed that are based on constructed comparison groups provide strong evidence that this approach to program evaluation is seriously flawed; the question of bias in comparison groups so constructed is virtually impossible to dispel. We believe that the planned JTPA evaluations using the new JTLS will suffer from the same problems.

RECOMMENDATION: Planning for the JTLS should give very serious consideration to the selection of randomized control groups.

In conclusion, we believe that quality research ought to be recognized and ought to be explicit in congressional and agency oversight policy. Special efforts should be made to improve the quality of research and evaluation designs for estimating the impact of youth employment projects. Existing professional guidelines can be used to influence quality of design as well as quality of research execution and reporting.

RECOMMENDATION: The committee recommends the following conditions as necessary but not sufficient for quality research: (1) the use of random assignment to participant and control groups and to program variations; (2) reasonable operational stability of the program prior to final assessment of effectiveness; (3) adequate sample coverage and low rates of sample attrition; (4) outcome measures that adequately represent the program objectives, both immediate and longer term; and (5) a follow-up period that allows adequate time for program effects to emerge or decay.

The General Conduct of Public Policy Research

One of the major implications of our review of YEDPA programs and research concerns the conduct of national public policy research and demonstration programs. It was very apparent in our review that many of the problems we faced in attempting to draw inferences from YEDPA research resulted from the fact that under YEDPA attempts were made to combine numerous research objectives with massive service delivery. The consequent tensions, conflicts, and overload on the system interfered with the careful planning and conduct of the research and demonstration activities, with the result that the research findings fall short in informing the public policy issues from which YEDPA originated.

RECOMMENDATION: In future efforts the objectives of research and demonstration should be more clearly and selectively focused on essential public policy issues and clearly separated from the objectives of massive service delivery. The magnitude of the effort and the expectation of results should be more in scale with limitations of time, money, and staff resources.

Dilemmas Confronting the Employment and Training System

In closing, we return to the two fundamental dilemmas with which we began this discussion of implications and recommendations for the system of employment and training in the United States. The employment and training system is trying in large part to do what the education system should be doing but, for some significant segment of the youth population, apparently fails to do. Yet the employment and training system has not attained stability of funding, professionalization of staff, and delineation of authority, in short, institutionalization of the sort that has given the educational system its accepted place in the mainstream of American life. As a result, in most communities, organizations involved in employment and training are considered marginal. The educational system, on the other hand, should not be taken as an exact model for the institutionalization of the employment and training system, since it has not yet found an effective way to prepare a substantial segment of the youth population for later employment.

For the most part, the youth programs of the employment and training system have been specifically targeted toward special segments of the youth population, often those perceived as most disadvantaged. Given that the major rationale for youth programs within the employment and training system is to assist those whom the educational system has failed to prepare for work, this target seems a sensible means to focus resources on those in greatest need. The problem is that this very targeting tends to create an image of the programs as designed only for "failures;" both the programs themselves and their clientele become stigmatized in the process. The staff of the programs may come to feel stigmatized as well and this can exacerbate problems of recruitment, retention, and management. Even the potential target group members can come to share the views of the broader community about the inherent marginality of these programs and the stigmatizing effects of participating in them, and it becomes increasingly difficult to enlist them in the programs and to keep them participating for sufficient time for the "program treatment to take hold." Yet, experience has shown that when programs are not targeted, the resources tend to be shifted rapidly to the more advantaged, better prepared, easier to handle segment of the youth population--those who have far less need for help with potential employment problems.

These fundamental dilemmas pose a major impediment to solving the serious unemployment problem of youths, and we emphasize again the need for a direct study of the roles and relationships of the education and the employment and training systems.

2

Youth Employment and Unemployment

THE YOUTH EMPLOYMENT PROBLEM: ITS NATURE AND DIMENSIONS

Unemployment Rates

The United States recently experienced its most serious unemployment problems since the Great Depression of the 1930s. In the depths of this recession, in December 1982, the overall unemployment rate reached a postwar high of 10.8 percent. But the unemployment rate for teenagers was 24.5 percent--more than twice the overall rate--and the unemployment rate for black teenagers was 49.5 percent. Since the trough of the recession, the national employment situation has improved somewhat, so that during 1984 the unemployment rate averaged 7.5 percent. The rate for teenagers was still substantially higher--18.9 percent--and the rate for black teenagers had improved only slightly, to 42.7 percent.

The youth employment problem is not due merely to the greater vulnerability of young workers to the swings of the business cycle. There has been a long-term upward trend in youth unemployment rates over the last several decades (Congressional Budget Office, 1982). Table 2.1a provides statistics for four periods from 1957 to 1984: 1957, 1964, and 1978 were chosen because they were years of relatively high economic activity and had identical unemployment rates for adult white men aged 35-44.

Over the period spanned by these statistics, the unemployment rate for all youths climbed steadily. In addition, the gap between white and nonwhite youths that was evident in 1957 became much larger over these decades. Thus, even among the more "settled" 20- to 24-year-old youths, the 1957 unemployment rate for white males was 7.1 percent while the rate for nonwhites was 12.7 percent; by 1984, this gap had expanded to 9.8 percent for whites and 24.5 percent for nonwhites. For women aged 20-24, the unemployment gap had expanded similarly, from 5.1 percent for whites and 12.2 percent for nonwhites in 1957 to 8.8 percent for whites and 23.5 percent for nonwhites in 1984.

Table 2.1b, which compares the unemployment rates for young white males with other youths, shows that nonwhite females aged 20-24 were 1.7 times as likely as white males to be unemployed in 1957; by 1984 they were 2.4 times as likely to be unemployed. In contrast, white females have in most years been less likely to be unemployed than white

TABLE 2.1a Youth Unemployment Rates in the Civilian Population for Selected Years (in percentages)

	Year			
Group	1957	1964	1978	1984
Adult white males				
35-44 years old	2.5	2.5	2.5	4.6
All youths				
16-17 years old	12.5	17.8	19.3	21.2
18-19 years old	10.9	14.9	14.2	17.4
20-24 years old	7.1	8.3	9.6	11.5
White males				
16-17 years old	11.9	16.1	16.9	19.7
18-19 years old	11.2	13.4	10.8	15.0
20-24 years old	7.1	7.4	7.7	9.8
Nonwhite males				
16-17 years old	16.3	25.9	39.8	39.8
18-19 years old	20.0	23.1	30.7	38.5
20-24 years old	12.7	12.6	20.0	24.5
Hispanic males				
16-17 years old	a	a	27.5	30.5
18-19 years old	a	a	13.9	21.6
20-24 years old	a	a	9.4	12.1
White females				
16-17 years old	11.9	17.1	17.1	17.8
18-19 years old	7.9	13.2	12.4	13.6
20-24 years old	5.1	7.1	8.3	8.8
Nonwhite females				
16-17 years old	18.3	36.5	41.5	42.2
18-19 years old	21.3	29.2	36.3	36.6
20-24 years old	12.2	18.3	21.3	23.5
Hispanic females				
16-17 years old	a	a	29.9	25.2
18-19 years old	a	a	16.6	21.4
20-24 years old	a	a	13.0	12.5

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak; 1984 was selected to provide a view of recent youth unemployment.

[a] No data for persons of Hispanic origin are available for 1957 or 1964.

SOURCE: Data from U.S. Department of Labor (1982, 1985b).

TABLE 2.1b Ratios Between Unemployment Rates for Young White Males and Other Groups

Group	Year 1957	1964	1978	1984
White males				
16-17 years old	1.0	1.0	1.0	1.0
18-19 years old	1.0	1.0	1.0	1.0
20-24 years old	1.0	1.0	1.0	1.0
Nonwhite males				
16-17 years old	1.41	1.61	2.36	2.02
18-19 years old	1.74	1.72	2.84	2.57
20-24 years old	1.79	1.70	2.60	2.50
Hispanic males				
16-17 years old	a	a	1.63	1.52
18-19 years old	a	a	1.29	1.44
20-24 years old	a	a	2.60	1.23
White females				
16-17 years old	1.03	1.06	1.01	.90
18-19 years old	.69	.99	1.15	.91
20-24 years old	.72	.96	1.08	.90
Nonwhite females				
16-17 years old	1.59	2.27	2.46	2.14
18-19 years old	1.85	2.18	3.36	2.44
20-24 years old	1.71	2.47	2.77	2.40
Hispanic females				
16-17 years old	a	a	1.77	1.28
18-19 years old	a	a	1.54	1.43
20-24 years old	a	a	1.69	1.28

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak; 1984 was selected to provide a view of recent youth unemployment.

[a] No data for persons of Hispanic origin are available for 1957 or 1964.

SOURCE: Data from U.S. Department of Labor (1982, 1985b).

males, but between 1957 and 1984 this ratio approached parity: for 20- to 24-year-old white females, the ratio of unemployment rates was 0.7 in 1957 and 0.9 in 1984. (Although comparable historical data are not available for Hispanic youths, the available data indicate that Hispanic males aged 20-24 were 1.2 times as likely as white males to be unemployed in 1984, and Hispanic females were 1.3 times as likely to be unemployed as white males.)

These continuing trends in the relative unemployment rates of young Americans were a primary motivation for the launching in the late 1970s of federally funded programs designed to provide employment and training services to disadvantaged youths. Yet, as the last column of Table 2.1a indicates, the gap between white and nonwhite unemployment rates has persisted: in 1984 unemployment among white youths aged 20-24 was 9.8 percent for males and 8.8 percent for females; for nonwhite youths the rates were 24.5 and 23.5 percent, respectively.

While the unemployment rates and ratios shown in Tables 2.1a and 2.1b demonstrate that young people's problems have been increasing, the unemployment rate can sometimes be a misleading indicator, particularly when applied to the youngest segment of the labor force (Hahn and Lerman, 1983:2). To be counted as unemployed a person must indicate in answer to a survey question that (1) she or he is not currently employed and (2) she or he is currently looking for work. People who are not working and who say they are not actively looking for work are counted as "out of the labor force" rather than unemployed. The unemployment rate is calculated by dividing the number of people who are unemployed by the number of people in the labor force (defined as the sum of the employed [E] and unemployed [U]):

$$\text{unemployment rate} = U/(U + E)$$

It can be seen that the unemployment rate can rise even though the number of employed (E) stays constant. And, given the way in which one is defined as being "in the labor force," it is not necessary that there be any change in the number of people who are not working. The unemployment rate may rise simply because more people begin looking for work (or at least say they are looking for work), thereby increasing the size of the labor force. [See Bailar and Rothwell (1984) and National Commission on Employment and Unemployment Statistics (1979) for discussions of this and other aspects of unemployment measurements.]

The unemployment rate is particularly ambiguous as an indicator of employment problems in the youth population because it becomes entangled with school attendance. When young people say that they are looking for work even though they are also enrolled in school, they are nonetheless counted as unemployed. This method of counting raises serious questions of interpretation since full-time students, it can be argued, already have a full-time though unpaid occupation, attending school. This component of youth unemployment statistics is not insubstantial: for example, almost half of the 1978 teenage unemployment shown in Table 2.1a is generated by youths who were enrolled in school. It is thus necessary to examine other measures to better understand the nature and scope of youth employment problems.

TABLE 2.2a Civilian Employment-to-Population Rates for Selected Groups (in percentages)

Group	Year 1957	1964	1978	1984
Adult white males				
35-44 years old	95.6	95.1	93.9	91.6
All youths				
16-19 years old	43.9	37.3	48.5	43.7
20-24 years old	59.5	60.9	69.6	68.7
White males				
16-19 years old	52.4	45.0	56.3	49.0
20-24 years old	80.5	79.3	76.0	78.0
Nonwhite males				
16-19 years old	48.0	37.8	29.8	25.2
20-24 years old	78.2	78.1	61.1	58.3
White females				
16-19 years old	38.3	32.2	48.7	47.0
20-24 years old	43.4	45.3	60.6	66.1
Nonwhite females				
16-19 years old	26.5	21.8	23.5	21.8
20-24 years old	40.9	43.7	45.4	46.3

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak. In 1984 the rate of unemployment among white males aged 35-44 was 4.6 percent.

SOURCES: Data from U.S. Department of Labor (1979, 1980a, 1985b); Bureau of Labor Statistics (1983).

Employment-to-Population Rates

Table 2.2a presents the employment-to-population rates (the number of employed divided by the total civilian population) for youths in the same years for which the unemployment rates are presented. Over the period 1957 to 1978, the employment rate in the youth population actually increased from 52.0 to 59.9 percent, although it then declined slightly to 58.3 percent in 1984 (not shown in the table). The increase in employment rates between 1957 and 1978 was more marked for

TABLE 2.2b Ratio of Civilian Employment-to-Population Rates for Young White Males to Other Young Groups

Group	Year 1957	1964	1978	1984
White males				
16-19 years old	1.0	1.0	1.0	1.0
20-24 years old	1.0	1.0	1.0	1.0
Nonwhite males				
16-19 years old	.92	.84	.53	.51
20-24 years old	.97	.98	.80	.75
White females				
16-19 years old	.73	.72	.87	.96
20-24 years old	.54	.57	.80	.85
Nonwhite females				
16-19 years old	.51	.48	.42	.44
20-24 years old	.51	.55	.60	.59

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak. In 1984 the rate of unemployment among white males aged 35-44 was 4.6 percent.

SOURCES: Data from U.S. Department of Labor (1979, 1980a, 1985b); Bureau of Labor Statistics (1983).

the older youth group, aged 20-24, than for the younger group, and the decline from 1978 to 1984 was steeper for the younger group.

At a more detailed level, the trends for various demographic groups are not homogeneous. For example, there was a large increase in the employment rates of white women aged 20-24 (from 43 percent in 1957 to 66 percent in 1984), but there was also a substantial decline in the employment rates for nonwhite men of the same age group (from 78.2 to 58.3 percent). Table 2.2b presents the ratios of the employment rates of each group to the employment rate for white males. From 1957 to 1984 this ratio declined markedly for nonwhite males. For nonwhite females the ratios declined for the younger group, while they increased somewhat for 20- to 24-year-olds. Nonetheless, in all years for both age groups, the likelihood that nonwhite females would be employed was less than 0.6 times the likelihood that white males would be employed. For white females, the ratios showed steady increases from 1964 to 1984, with the ratio for the most recent year approaching parity for 16- to 19-year-olds; however, it was somewhat lower (0.85) for 20- to 24-year-olds.

Employment of In-School and Out-of-School Youths

Any discussion of employment-to-population rates runs the risk of confusing trends in school attendance with trends in employment.[1] In the present case, this is a particularly worrisome possibility. While the employment rate for nonwhite youths has declined over the last 3 decades (as shown in Table 2.2a), the school enrollment rate for nonwhite youths has increased during these same decades. The rate of high school completion among black men and women aged 25-29 rose from 47.7 percent in 1960 to 65.4 percent in 1970 and to 79.4 percent in 1983.

The employment patterns of youths who are enrolled in school are, of course, considerably different from those who are out of school. Table 2.3 provides a breakdown by school enrollment of the employment rates for 1964, 1978, and 1981 for all youths aged 16-24.[2] As one would expect, in-school youths are less likely to be employed than out-of-school youths. However, there are significant differences in these rates over time for different groups. For white males, the employment rates increased for in-school youths from 34.0 percent in 1964 to 43.4 percent in 1981, while the rate for out-of-school youths was stable at approximately 87 percent between 1964 and 1978 and then declined slightly during the economic downturn in 1981. In contrast, the employment rates of black males have shown a marked decline for both in-school and out-of-school youths: the rate for those out of school was 80.5 percent in 1964, 67.8 in 1978, and 57.8 in 1981; the rate for those in school dropped from 30 percent in 1964 to 20 percent in 1978 and was still at 20 percent in 1981.[3]

---

[1] Ideally, one would like to examine trends in employment status broken down by school enrollment, race, sex, age, presence of dependents, and living arrangements. Unfortunately, tabulations of employment statistics (e.g., the Employment and Earnings series and the Handbook of Labor Statistics) do not provide the appropriate detail. Indeed, even with the 60,000+ sample size of the Current Population Survey, we suspect it would be difficult to obtain reliable estimates for all the cells of such a cross-tabulation. Consequently we use the strategy of examining the employment status of older, out-of-school youths as a crude substitute.

[2] The years 1964 and 1978 were selected to provide consistency with other tables in this chapter. Appropriate data were not published in 1957 (or earlier years). No data are currently available for 1984; consequently, we have used the most recent published statistics, for 1981.

[3] In this discussion of Tables 2.3 and 2.4 we used statistics for black youths rather than for nonwhite youths. This reflects the categorization used in the published statistics.

Federal statistics for recent years generally divide the population by black and white and include counts for the total population (so nonwhite statistics can be computed). For earlier years it is often

TABLE 2.3 Employment-to-Population Rates for In-School and Out-of-School Youths Aged 16-24 by Sex and Race: 1964-1981

Group	Employment-to-Population Rate Out-of-School Youths	In-School Youths
White males		
1964	86.7	34.0
1978	86.9	46.9
1981	81.1	43.4
Black males		
1964	80.5	30.0
1978	67.8	20.3
1981	57.8	20.1
White females		
1964	47.3	23.3
1978	66.2	45.7
1981	68.3	43.0
Black females		
1964	48.0	15.4
1978	46.9	20.6
1981	43.0	17.2

SOURCE: Bureau of Labor Statistics (1982:Table C-42).

Comparing the data for young males, one finds that in 1964 the employment rates of both in-school and out-of-school black males were roughly 90 percent as large as those of white males. However, by 1981 this gap had widened enormously: in-school black males were less than 50 percent as likely to be employed as white males, and out-of-school black males were only 71 percent as likely to be employed as white males.

For young females, the data for blacks and whites also show very different trends. Both in-school and out-of-school white females registered roughly a 20 percentage point increase in their employment-

---

the case that only statistics for whites and nonwhites were published. It is thus impossible to produce long time series (e.g., 1950-1980) that describe the black youth population. Nonetheless, the nonwhite statistics, while less than ideal, do capture much of what is important since blacks constitute the vast majority of the nonwhites in the United States. In 1980 the nonwhite population included: 26.5 million blacks; 3.5 million Asians and Pacific Islanders; 1.4 million American Indians, Eskimos, and Aleuts; and 6.8 million persons whose race was classified as "other."

TABLE 2.4 Employment-to-Population Rates for Out-of-School Youths by Age, Race, and Sex: 1964-1981

Group	Age 16-17	18-19	20-24
White males			
1964	65.6	80.9	90.0
1978	52.2	85.0	89.5
1981	54.3	75.3	84.0
Black males			
1964	43.8	73.4	86.6
1978	19.4	44.7	59.4
1981	22.2	39.8	62.8
White females			
1964	30.7	51.9	47.3
1978	47.3	64.7	67.7
1981	34.1	62.4	68.3
Black females			
1964	35.9	45.1	50.2
1978	21.4	46.7	63.4
1981	5.5	29.5	48.5

SOURCE: Bureau of Labor Statistics (1982:Table C-42).

to-population rates between 1964 and 1981. For the in-school group, their employment rate in 1981 was virtually identical to that of white males. For out-of-school females, their employment rates were consistently below those of young white males, although they increased significantly between 1964 and the later two years. For black females, there was a slight upward trend in employment while in school during the period 1964 to 1981; for the out-of-school group, the rate declined slightly over the period, from 48 percent in 1964 to 43 percent in 1981.

Table 2.4 disaggregates the employment-to-population rates of out-of-school youths by age. This breakdown shows that the aggregate results hold for all age groups of out-of-school youths, including the oldest. Many researchers argue that unemployment among these older, out-of-school youths is of particular concern because they are more likely to have dependents to support and to be living outside their parental home. This group shows the familiar pattern of rather high employment rates among white males (90.0 percent in 1964, 84.0 percent in 1981) and consistently lower rates for blacks and females. For out-of-school black males aged 20-24, the employment-to-population rate in 1964 (86.6 percent) approaches that of white males, but the rate declines by over 20 percentage points in the following decade. White females in this age group show increasing rates of employment, but they are still less likely to be employed than white males (47.3 percent of

TABLE 2.5a Civilian Labor Force Participation Rates by Age, Race, and Sex (in percentages)

Group	Year 1957	1964	1978	1984
All youths				
16-17 years old	40.2	35.1	48.6	42.4
18-19 years old	60.4	57.2	67.3	64.9
20-24 years old	64.0	66.3	76.8	77.6
White males				
16-17 years old	49.6	43.5	55.3	47.0
18-19 years old	71.6	66.6	75.3	70.8
20-24 years old	86.7	85.7	87.3	86.5
Nonwhite males				
16-17 years old	47.5	37.3	33.2	27.0
18-19 years old	72.0	67.2	58.9	55.4
20-24 years old	89.6	89.4	77.5	77.2
White females				
16-17 years old	32.1	28.5	48.8	44.8
18-19 years old	52.6	49.6	64.6	65.2
20-24 years old	45.8	48.8	69.3	72.5
Nonwhite females				
16-17 years old	24.1	19.5	27.7	24.7
18-19 years old	42.8	46.5	48.4	45.8
20-24 years old	46.6	53.6	62.6	60.5

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was at about its peak. In 1984 the rate of unemployment among white males aged 35-44 was 4.6 percent.

SOURCE: Data from U.S. Department of Labor (1982, 1985b).

white females were employed in 1964 and 68.3 percent in 1981). For black females aged 20-24, the employment rate rises from 50.2 percent in 1964 to 63.4 percent in 1978 and then declines to 48.5 percent in 1981.

Labor Force Participation Rates and Summary of Employment Data

Tables 2.5a and 2.5b provide complementary information on the aggregate civilian labor force participation rates of youths by age, sex, and race. (The civilian labor force participation rate is the ratio of employed and unemployed people to the total nonmilitary

TABLE 2.5b Ratio of Civilian Labor Participation Rates for Selected Groups to Rate for White Males

Group	Year 1957	1964	1978	1984
White males				
16-17 years old	1.0	1.0	1.0	1.0
18-19 years old	1.0	1.0	1.0	1.0
20-24 years old	1.0	1.0	1.0	1.0
Nonwhite males				
16-17 years old	.96	.86	.60	.57
18-19 years old	1.00	1.00	.78	.78
20-24 years old	1.03	1.04	.89	.89
White females				
16-17 years old	.65	.66	.88	.95
18-19 years old	.73	.74	.86	.92
20-24 years old	.53	.57	.79	.84
Nonwhite females				
16-17 years old	.43	.45	.50	.53
18-19 years old	.60	.70	.64	.65
20-24 years old	.54	.63	.72	.70

NOTE: The years 1957, 1964, and 1978 were selected because in each of these years the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was at about its peak. In 1984 the rate of unemployment among white males aged 35-44 was 4.6 percent.

SOURCE: Data from U.S. Department of Labor (1982, 1985b).

population; as noted above, the labor force statistics exclude persons who are unemployed and not looking for work.) A comparison of the rates in Tables 2.1a through 2.2b and Tables 2.5a and 2.5b suggest that youth unemployment is generated by somewhat different underlying trends for males and females and whites and nonwhites. For that reason it is useful to discuss each group separately.

White Males

The labor force participation rates for white males fluctuated over the 1957-1984 period. They were up in 1957 and 1978 (particularly for 16- to 17-year-olds) but declined in 1964 and 1984. There was also an upward movement in the employment-to-population rate between 1957 and

1978 for youths aged 16-19, but the employment rate for youths aged 20-24 declined from 80 percent to 76 percent in 1978 then rose to 78 percent in 1984. The unemployment rate for the younger group has increased because the labor force participation rate of the group aged 16-17 has increased by more than the employment-to-population rate.

Nonwhite Males

For nonwhite males the story is stark and consistent. During the period from 1957 to 1984, the labor force participation rates of young nonwhite males of every age group declined considerably, and their employment-to-population rates also dropped markedly. The proportion of those aged 16-19 who were employed declined from 48 to 25.2 percent; for those aged 20-24 it declined from 78.2 to 58.3 percent. Thus the large increases shown in Table 2.1a for the unemployment rates of nonwhite males understate the labor market difficulties faced by this group: had their labor force participation rates not declined from 1957 to 1984, their unemployment rates would have been even higher than shown in Table 2.1a.

White Females

White females sharply increased their labor force participation from 1957 to 1984. For 20- to 24-year-olds, the rate of participation increased from 45.8 to 72.5 percent, and the gap between white male and female levels of participation decreased substantially. The employment-to-population rates for this group also increased during this period, from 43.4 to 66.1 percent for those aged 20-24, and as a result their unemployment rate increased. The overall picture for white females is one of an improving employment situation, but one that has not improved rapidly enough to keep pace with their increasing desire (and need) to participate in the labor force.

Nonwhite Females

The labor force participation rates of nonwhite females increased less rapidly than did the rates for white females, although the increase for 20- to 24-year-olds is still quite sharp, from 46.6 percent in 1957 to 60.5 percent in 1984. During the entire period, nonwhite females have had lower labor force participation rates than all other subgroups. The employment-to-population rate for nonwhite females declined for those aged 16-19 and increased for those aged 20-24. For the entire period nonwhite females had lower employment-to-population rates than all other subgroups. Thus, despite some signs of improvement in absolute levels for those aged 20-24, the employment rates reveal the very serious situation of nonwhite females in comparison with other groups of the youth population.

Hispanic Youths

There are no adequate historical data to perform similar analyses for Hispanic youths, and so we are unable to assess the dynamics that may account for the Hispanic unemployment rates shown in Table 2.1a. Those rates are higher than those for white youths but lower than those for nonwhite youths: as shown, for males aged 20-24, the unemployment rates in 1984 were 9.8 percent for white males, 12.1 percent for Hispanic males, and 24.5 percent for black males.

Inactivity Rates

The above analyses suggest that when one looks beyond the unemployment rate, a more complex picture of the nature of the youth unemployment problem emerges. The most striking features of this picture are the changing dynamics of female employment (particularly among whites) and the stark contrast between the employment statistics for young black men and women and those faced by other groups. These differences can be seen even more clearly in "inactivity rates," the numbers of youths who are neither in school, nor in the military, nor employed relative to their population. Table 2.6a presents inactivity rates for several demographic groups for the years 1964, 1978, and 1983. For almost every group the inactivity rates were lower in 1978 than they were in 1964; the major exception is for nonwhite males aged 20-24, whose inactivity rate during this period climbed from 10.5 to 15.9 percent.

It should also be noted that the inactivity rates for both white and nonwhite women aged 20-24 remained strikingly higher than those for white and nonwhite males. As shown in Table 2.6a, the inactivity rates for nonwhite females in 1978 were 28.0 percent for 18- to 19-year-olds and 33.5 percent for 20- to 24-year-olds.

In 1983 the inactivity rates of almost all groups were higher than in 1978. This reflects the depressed state of the national economy in 1983, which is also reflected in the rise in the rate of unemployment for 35- to 44-year-old white males from 2.5 percent in 1978 to 5.2 percent in October 1983. During this period the inactivity rates for nonwhite females took especially large leaps: in 1983 more than 40 percent of nonwhite women aged 18-24 were out of work and out of school.

While inactivity rates for all groups rose in 1983, because inactivity rates for white males rose faster than did those of other groups, the situation of nonwhites of both sexes and white females showed some improvement relative to that of white males; see Table 2.6b. For example, among 20- to 24-year-olds, the inactivity rates relative to white males declined from 2.69 to 2.33 for nonwhite males, from 4.08 to 2.16 for white females, and from 5.68 to 3.93 for nonwhite females. However, the inactivity rates for both male and female nonwhites and for white females are still higher than those for white males. Over the entire period 1964 to 1983, the lowest inactivity rates for every age group are those for white males.

TABLE 2.6a Inactivity Rates for Youths by Race and Sex

	Year		
Group	1964	1978	1983[a]
White males			
16-17 years old	3.3	3.6	4.5
18-19 years old	8.0	4.7	13.1
20-24 years old	6.1	5.9	11.6
Nonwhite males			
16-17 years old	8.4	3.7	4.7
18-19 years old	14.6	13.2	29.3
20-24 years old	10.5	15.9	27.0
White females			
16-17 years old	9.6	4.6	5.7 (5.7)
18-19 years old	31.9	13.2	18.5 (18.6)
20-24 years old	46.8	24.1	25.1 (25.3)
Nonwhite females			
16-17 years old	11.5	6.4	5.8 (5.9)
18-19 years old	36.2	28.0	42.2 (42.5)
20-24 years old	45.7	33.5	45.6 (45.6)

NOTE: Inactivity rates are the percentage of the population that is neither employed, serving in the military, nor enrolled in school. The years 1964 and 1978 were selected because the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak. October 1983 is the most recent date for which comparable rates can be computed. In October 1983 the rate of unemployment among white males aged 35-44 was 5.2 percent (not seasonally adjusted).

[a] For 1983, figures in parentheses are female inactivity rates calculated to take account of military service by females.

SOURCES: Data for 1964 and 1978 from Congressional Budget Office (1982); data for 1983 computed from Bureau of Labor Statistics (1984) and unpublished tabulation of military enrollment by age, race, and sex. (Data for 1984 are not currently available.)

TABLE 2.6b Ratio of Inactivity Rates for Other Groups to Those for White Males

Group	Year 1964	1978	1983[a]
White males			
16-17 years old	1.0	1.0	1.0
18-19 years old	1.0	1.0	1.0
20-24 years old	1.0	1.0	1.0
Nonwhite males			
16-17 years old	2.55	1.03	1.04
18-19 years old	1.82	2.80	2.24
20-24 years old	1.72	2.69	2.33
White females			
16-17 years old	2.91	1.28	1.27 (1.27)
18-19 years old	3.99	2.81	1.41 (1.42)
20-24 years old	7.67	4.08	2.16 (2.18)
Nonwhite females			
16-17 years old	3.48	1.78	1.29 (1.31)
18-19 years old	4.53	5.96	3.22 (3.24)
20-24 years old	7.49	5.68	3.93 (3.93)

NOTE: Inactivity rates are the percentage of the population that is neither employed, serving in the military, nor enrolled in school. The years 1964 and 1978 were selected because the unemployment rate for white males aged 35-44 was an identical 2.5 percent and the business cycle was about at its peak. October 1983 is the most recent date for which comparable rates can be computed. In October 1983 the rate of unemployment among white males aged 35-44 was 5.2 percent (not seasonally adjusted).

[a] For 1983, figures in parentheses are female inactivity rates calculated to take account of military service by females.

SOURCES: Data for 1964 and 1978 from Congressional Budget Office (1982); data for 1983 computed from Bureau of Labor Statistics (1984) and unpublished tabulation of military enrollment by age, race, and sex. (Data for 1984 are not currently available.)

As the ratios presented in Table 2.6b make clear, the disparities in inactivity rates are often quite large. For females, even though the disparities in inactivity declined between 1964 and 1983, inactivity rates for those aged 20-24 were still 2.16 (for whites) and 3.93 (for nonwhites) times as large as those of white males. (It is unfortunate that we are unable to disaggregate this result to determine the portion of female "inactivity" that represents women who are at home with young children. Because some of this female "inactivity" represents child-bearing, readers are advised to interpret the inactivity rates in conjunction with the unemployment rates shown in Table 2.1.) For nonwhite males, the trends across time show increasing disparity for youths aged 18-24. While the ratio of inactivity rates was 1.82 (for those 18-19) and 1.72 (for those 20-24) in 1964, it had increased to 2.24 and 2.33 by 1983, and the disparity was even higher during 1978, a time of increased economic activity. The sole exception to this disturbing picture is found among the youngest group of nonwhite males. Their ratio declined from 2.55 in 1964 to approximate parity in 1978 (a ratio of 1.03) and remained at that level in 1983 (a ratio of 1.04). This improvement relative to white males is attributable to increased levels of school enrollment and roughly constant rates of military enlistment for young black males. A similar trend can be observed for 16- to 17-year-old females, although in 1983 both white and nonwhite females were still approximately 1.3 times as likely to be out of school and out of work as white males.

Entry, Turnover, and Unemployment

Another way to understand the nature of the youth employment problem is to study the nature of the events that lead to unemployment. An analysis by Freeman and Medoff (1982) provides some insight into the processes that lead to youth unemployment (see Table 2.7). The salient feature of Table 2.7 is the sizable proportion of young people whose unemployment is associated with entry into the labor force--either for the first time, as new entrants, or reentry after a period out of the labor force. The high proportion of new entrants among youths is not surprising. The high proportion of reentrants reflects the fact that teenagers tend to drop out of the labor force after a period of unemployment. As youths get older, however, their unemployment is less likely to be due to entry or reentry into the labor market.

Thus, in 1978, for those aged 16-17, entrants into the labor market accounted for the vast majority of the unemployed--39.8 percentage points of the 44.0 percent unemployment rate of blacks and 11.0 percentage points of the 13.8 percent unemployment rate of whites in 1978. Among those aged 18-19 entrants into the labor market accounted for 30.5 percentage points of the 38.0 percent unemployment rate for blacks and 4.5 percentage points of the 9.0 percent rate for whites. By the age of 20-24, most of the unemployed youths have left or lost their jobs: entrants into the labor market account for only 7.9 percentage points of the 18.8 percent black unemployment rate and 2.3 percentage points of the 6.6 percent white unemployment rate.

TABLE 2.7 Direct Causes of Youth Unemployment, Males and Females: 1969-1978

	Black			White		
Age and Status	1969	1975	1978	1969	1975	1978
16-17 years old						
Total unemployment rate	24.6	42.4	44.0	10.7	17.7	13.8
losers	2.7	5.6	3.4	1.4	3.3	1.5
leavers	2.4	1.8	0.8	1.0	1.4	1.3
total entrants	19.6	35.1	39.8	8.2	13.0	11.0
reentrants	7.7	19.5	11.9	3.5	5.0	4.2
new entrants	11.9	15.6	28.0	4.7	8.0	6.8
18-19 years old						
Total unemployment rate	18.5	36.7	38.0	5.7	15.9	9.0
losers	5.4	13.1	4.8	1.9	7.2	2.7
leavers	4.5	0.7	2.7	0.7	1.3	1.9
total entrants	8.6	22.9	30.5	3.1	7.4	4.5
reentrants	8.1	14.1	17.8	2.5	4.8	2.9
new entrants	0.5[a]	8.8	12.7	0.6	2.6	1.6
20-24 years old						
Total unemployment rate	7.1	28.3	18.8	4.4	13.6	6.6
losers	2.5	18.0	8.7	1.6	8.7	3.1
leavers	2.7	1.7	2.2	1.0	1.0	1.2
total entrants	2.0	8.7	7.9	1.7	4.0	2.3
reentrants	1.5	5.8	5.1	1.5	3.6	1.8
new entrants	0.5	2.9	2.9	0.2	0.4	0.5

NOTE: Regularly published tabulations (e.g., Employment and Earnings) do not provide age breakdowns for 16- to 17- and 18- to 19-year-olds. Thus there are no readily accessible tabulations for years after 1978.

[a] This rate is reported as .05 in Freeman and Medoff (1982). This appears to be a typographical error; it has been corrected to 0.5, which would be consistent with the published rates for total entrants and reentrants.

SOURCE: Freeman and Medoff (1982).

A second important cause of unemployment as shown in Table 2.7 is the high percentage of job losers; for all but one group (blacks aged 20-24 in 1969), job losers exceed job leavers. In contrast to the usual view that youths have high unemployment rates because they quit jobs more often than adults, these data indicate that their problems arise primarily because they lose jobs or tend to find jobs for which the probability of firing or layoffs is higher.

TABLE 2.8 Ratios of the Median Usual Weekly Earnings of Out-of-School Males to Earnings of Male Workers Aged 25 and Older, by Race: 1967-77

	Earnings of Full-Time Young White Men/ Earnings of Full-Time White Men, Age 25+		Change in Earnings Ratios	Earnings of Full-Time Young Nonwhite Men/ Earnings of Full-Time White Men, age 25+		Change in Earnings Ratios
Age	1967	1977	1967-77	1967	1977	1967-77
16	.38	.34	-.04	.33	.32	-.01
17	.49	.39	-.10	.39	.32	-.07
18	.54	.49	-.05	.44	.44	.00
19	.61	.52	-.09	.42	.43	-.01
20	.66	.58	-.08	.63	.52	-.11
21	.73	.61	-.12	.57	.50	-.07
22	.79	.63	-.16	.59	.54	-.05
23	.81	.71	-.13	.59	.54	-.05
24	.87	.75	-.12	.60	.63	-.03

SOURCE: Data from Freeman and Medoff (1982:Table 3.9).

In an interesting analysis of the black/white differential in unemployment, Freeman and Medoff (1982) demonstrate that much of the gap is due to the longer time it takes young black men and women to find a job on entry into the labor force. In addition, among youths aged 20-24, the higher black unemployment rate is partly due to a higher job loss rate than for whites. Black youths appear to have both a harder time finding a first job and a greater likelihood of losing a job than whites (Freeman and Medoff, 1982).

Entry and job turnover figures cannot, however, be used to discount the unemployment problem as a whole, since a subset of youths are unemployed for long periods of time and bear a disproportionate share of the burden. Feldstein and Ellwood (1982), using 1976 Current Population Survey data on out-of-school teenagers, estimate that 8.3 percent of the youths were unemployed for more than 26 weeks and account for 52 percent of total unemployment days among that group. Lerman (1980a) estimates, using 1977 data, that 70-80 percent of total youth unemployment (including that of in-school youths) was borne by youths with 15 or more weeks of unemployment.

Wages and Earnings

While many employment problems can be measured in terms of nonemployment of one type or another, a full picture of the youth employment predicament also requires consideration of wages and earnings. Table 2.8 presents data on the earnings of male youths as a percentage of earnings of white males aged 25 and over. Two features of these data should be noted: First, over the decade from 1967 to 1977, the earnings of young men relative to those of adult men declined.

Second, the extent of the decline was greater for white than nonwhite youths and, therefore, the earnings of young black men grew relative to those of young white men. Thus, we see both a general deterioration of earnings of young males and a relative increase in earnings (actually a smaller decrease) for young black males compared with young white males. Moreover, when various individual characteristics are controlled, the average wages for young black males are not significantly different from those of young white males.

The observed difference in total earnings is due primarily to the fact that the probability of a young black male with a given set of characteristics obtaining a job is much lower than that of a young white male with similar characteristics (Freeman, 1980). Unfortunately, there is no comparable analysis for the earnings of young women, and thus we do not know if a similar finding would result.

CAUSES AND CONSEQUENCES OF YOUTH EMPLOYMENT PROBLEMS

The previous section has documented unemployment rates and other measures of employment for youths and differences among blacks and whites, males and females, and other groups for the past 2 decades. It has also raised a score of questions. What explains the high unemployment rate of youths compared with adults? Why have rates of unemployment been rising? Why has the gap between blacks and whites widened? How do these trends relate to the relative decline in earnings for young full-time workers and the narrowing gap in earnings between young white and black full-time workers? What is the source of the male/female differences in youth employment experiences?

Researchers typically discuss a number of supply and demand factors that might contribute to continuing high unemployment rates for youths (e.g., Ellwood and Wise, 1983). On the demand side the factors include: poor macroeconomic performance; shifting geographical and industrial distribution of jobs; minimum wage laws and other government interventions in the labor market; discrimination in hiring; and demand for military personnel. On the supply side the factors include: the baby boom bulge and other demographic factors; unrealistic expectations of youths and the "reservation" wage; and mismatched jobs and educational qualifications. Each of these factors is discussed in this section, in turn, along with recent empirical evidence and the nature of continuing disagreements among researchers. At the end of this section, we also consider other factors that do not fit neatly into the demand and supply categories.

At the outset it should be kept in mind that it is not possible to discriminate accurately among all these causes given the available data. If time-series data are used, there are too many overlapping and correlated trends to distinguish among them: for example, the baby boom bulge coincided with "stagflation" and poor macroeconomic performance in the 1970s. It is also very difficult to measure or distinguish between the effects of subjective variables such as discrimination on the demand side or low motivation or lack of general skills on the supply side.

Factors Affecting the Demand for Labor

Macroeconomic Conditions

The unemployment rates of youths are more sensitive to macroeconomic conditions than are those of adults. Comprehensive studies of time-series data by the Congressional Budget Office and the Council of Economic Advisors suggest that a 1 percent change in the unemployment rate for adult males is matched by a 1.5 percent change for white youths and a 2.5 percent change for black youths (e.g., Congressional Budget Office, 1978). Freeman (1982) has argued and we agree that the employment-to-population ratio is a more reliable indicator of youth activity. In both time-series and cross-sectional data, he finds that a 1 percent change in the total male unemployment rate leads to a 1.7 to 2.4 percent change in the employment-to-population ratio for youths aged 16-19 and a 1.5 to 3.4 percent change for those aged 20-24 (Freeman, 1980). Bowers has reviewed the employment experiences of blacks, teenagers aged 16-19, and women during all business cycles from 1948 to 1980, and he also concludes (Bowers, 1981) that teenagers and blacks, both in the aggregate economy and in key cyclical sectors, suffer a disproportionate share of the decline in employment that occurs during economic recessions.

It should be noted that when the adult male unemployment rate was trending upward over the past 2 decades (even from peak to peak in the business cycles), the foregoing relationships imply that there would be an even greater deterioration in the employment situation for the teenage group. Such data provide only a crude indicator, of course, of the complex relationships that exist between the employment problems of teenagers and the evolution of the macroeconomic situation in the nation. Nonetheless, there appears to be substantial agreement among most researchers that a relatively high level of economic activity is essential for any long-term improvement in the youth employment situation.

Industrial and Geographical Shifts in the Economy

From year to year, the American economy changes. Wealth increases and tastes change, new technologies are discovered and brought on line, old factors of production or natural resources are used up and new ones found, foreign trade opens up opportunities for some U.S. goods and creates intense competition for others. At the same time, broad shifts may occur in where people want to live, from one region to another or from cities to suburbs or from suburbs to rural areas. These changes are very likely to lead to shifts in the demand for young workers over time, although the precise links may be hard to trace. If wage rates or other factors of production were totally flexible--as in classical economic models--supply and demand would quickly adjust, but such is not the case in reality.

The decline of agriculture and the movement of black families from southern rural areas to northern cities explains some of the widening black/white youth unemployment gap in the 1950s and early 1960s. Cogan (1982), Lerman (1980a), and Mare and Winship (1983), among others, have pointed out that in 1950 young black men in farm areas of the South experienced minimal unemployment (e.g., 3 percent for 18- to 19-year-olds). At the same time, the unemployment rate for urban young black men was 20 percent, substantially higher than for whites. The large-scale flow of blacks northward and from rural to urban areas would thus, all else being equal, contribute to an increased disparity between the unemployment rates of white and black males (since the black migrants would now, presumably, suffer from unemployment at the higher rate characteristic of black urban residents). However, since 1970 migratory patterns have changed, and the racial differential has been increasing in all regions. Migration alone cannot explain this phenomenon.

Another possible cause of a downward shift in demand for youths, particularly for blacks, is the movement of jobs from the inner cities to the suburbs and beyond (a move resulting in large part because land and other costs are lower). This is a matter of some dispute in the economics literature. Leonard (1984) has found, for example, that the ratio of black to total employment in any given firm in Los Angeles or Chicago in the 1970s varied inversely with distance from the black ghetto. Over time, the loss of employment in the cities has resulted in an appreciable loss of jobs for blacks who, apparently because of racial discrimination, do not follow the jobs as they move into the suburbs and nonmetropolitan areas. However, this movement of jobs away from where blacks live cannot explain the black/white differential that persists within inner cities. Ellwood (1983), for example, has shown that in Chicago distance from jobs was a weak predictor of employment: for black and white youths living in adjacent neighborhoods, black youth employment could be as much as 20 percent lower than white youth employment; similarly, blacks in neighborhoods near jobs were no more likely to be employed than blacks in neighborhoods far away from jobs.

Minimum Wage Laws and Other Government Interventions

Low wages are an unfortunate fact of life for many young workers in America. Since low-wage workers are more likely to have their jobs affected by the statutory minimum wages, much of the concern about the policy implications of minimum wages has focused on the impact of minimum wages on the youth labor market. There have been several comprehensive reviews of the impact of minimum wage laws on the youth labor market (Brown et al., 1982; Freeman, 1982; Report of the Minimum Wage Study Commission, 1981; Welch and Cunningham, 1978; Mincer, 1976; Kosters and Welch, 1972). Most estimates of the disemployment effects are relatively small. The estimates from time-series data indicate that the disemployment effects for white males resulting from a 10 percent increase in the statutory minimum would reduce the level of employment by 1-3 percent (Freeman, 1980). For young blacks and women, there are larger estimated effects, and the greatest effects on employment are for the youngest workers. Theoretically, nonwhites should experience greater levels of disemployment, but Brown, Gilroy, and Kohen (1982) could find no convincing evidence that this occurs.

Economic researchers have also become interested in the nonemployment influences of a statutory minimum wage. Hashimoto (1982), Lazear and Miller (1981), and Fleisher (1981) have argued that, in addition to whatever disemployment effects are caused, the minimum wage will also prevent young people from being able to engage in on-the-job training. These human capital theorists propose a model in which an employee's full wage has a market wage and an unmeasured component of on-the-job training that shows up in future wage growth. Using the National Longitudinal Survey (NLS) between 1966 and 1969, Hashimoto (1982) estimates that the loss in earnings growth would be between 2.7 and 15 percent of the observed wage of workers. It seems unlikely, however, that the minimum wage could explain the increasing gap in employment between adults and youths (particularly minorities and women) since, in real terms, the minimum wage has been declining in recent years.[*]

Discrimination

Discrimination could contribute to youth employment problems in the form of discrimination on the basis of age or on the basis of race or sex. That employers prefer older workers to younger workers seems to be well established. However, whether this preference constitutes discrimination depends on whether there are in fact differences in productivity, costs of training, and turnover associated with younger workers (Freeman, 1980). There have been few attempts to establish such relationships empirically. Discrimination studies have consistently shown black adult workers to have lower earnings than whites after the measured individual characteristics have been controlled for; a large part of this earnings differential is associated with the probability of employment rather than differences in wages.

---

[*] In addition to whatever disemployment or nonemployment is caused by the minimum wage on the demand side, the existence of income maintenance programs may work (along with minimum wage laws) to provide an alternative to work for children of families receiving income maintenance. Thus, these government interventions might affect the supply of labor. Betsey and Dunson (1981) find that part of the estimated minimum wage impact may be attributable to increases in welfare payments. It is clear that in trying to assess the impact of minimum wages one has to also consider changes in other income maintenance programs.

Venti (1984) has estimated the disemployment effects caused by one income maintenance program, using data from the Seattle-Denver Income Maintenance Experiment. This experiment offered benefits well in excess of contemporary welfare programs (e.g., financial support levels for a family of four of $3,800, $4,800, and $5,600 in constant 1971 dollars). Venti finds that this income maintenance program had large disemployment effects, but that when one considers the choice as a joint one with the decision to go to school, almost all of the disemployment is a movement into schooling, not into idleness. Venti and Wise (1984) argue that interpretation of these results requires an allowance for schooling decisions because analysis of "the simple work effect may be an incomplete indicator of the social and economic consequences of an income maintenance program." Of course, in turn, one does not know whether some of this movement into schooling may represent disguised idleness: Are youths using their time to gain real market skills through schooling or simply disguising their problem with unproductive schooling?

With respect to wages and earnings (net of weeks worked) and common human capital variables (e.g., education), economists have generally found substantial evidence of discrimination in wages prior to the mid-1960s, but in more recent years the available evidence suggests that discrimination in wage rates by race has been narrowed (Reimers, 1983) or effectively ended (Osterman, 1980; Freeman, 1973). For women workers, however, the situation is quite different. Among full-time, year-round workers, the earnings of women average less than 60 percent of those of men, and young women (age 20-24 years) earn approximately 87 percent as much as young men. A National Research Council review of discrimination in wage-setting found that the evidence "suggests that only a small part of the earnings differences between men and women can be accounted for by differences in education, labor force experience, labor force commitment, or other human capital type factors believed to contribute to productivity differences among workers" (Treiman and Hartman, 1981). A major confounding factor is the substantial occupational segregation of the work force--with women being concentrated in occupations that are low paying.

With respect to employment--in contrast to wages--efforts have been reported by Osterman (1980b) to account for the disparity in unemployment rates between whites and blacks on the basis of standard human capital variables. He found that about one-half of the gap in unemployment rates between young black and white workers could be accounted for: if one followed the convention used in the earnings literature, the residual gap would be attributed to discrimination (Osterman, 1980b). The actual mechanics by which this discrimination operates are difficult to specify. Culp and Dunson (1983) present findings from a pilot study suggesting that treatment of job applicants with the same backgrounds and qualifications may depend in many crucial ways on the race of the applicant. There is also evidence (Rossi and Ornstein, 1973) suggesting that the social networks and friendships used to find jobs are segregated by race, resulting in some disadvantage to nonwhite youths.

While discrimination may account for differences between blacks and whites at a given point in time, it is more difficult to establish that increases in discrimination in the late 1960s and the 1970s were an important factor in explaining the increasing differential in employment between young blacks and young whites.

Antidiscrimination Laws and Enforcement

The three key pieces of statutory and administrative policy that affect the level of discrimination in society--Title VII of the 1964 Civil Rights Act, Executive Order 11246, and the Equal Pay Act of 1962--emphasize the job market opportunities of entrants or reentrants into the job market. All three were enacted or issued before the employment problems of young people were generally viewed as central issues in the society.

Analysts disagree on how effective Title VII (and other measures) can be for young minority and female workers. The statute exempts many small employers from the statutory scheme. When the act became effective on July 2, 1965, it applied only to employers of 100 workers or more. The current limit is 15 workers, which still excludes coverage for many young people employed in small stores and restaurants. More than one-third of all youths aged 16-24 work in retail trade, including restaurants, and many of these are small operations not covered by Title VII.

In addition to jobs not being covered by Title VII or corresponding limitations in Executive Order 11246, many young workers may find the cost of litigation to be too great, given their lack of commitment to a particular job. In order to bring pressure on a recalcitrant employer, someone must be willing to complain and involve himself or herself in the expensive and time-consuming process of enforcing the statute's prohibitions against discrimination. One would expect the willingness to finance and bring suits to be positively related to expected length of job tenure and the relative attractiveness of that job in comparison with other possible job opportunities for the potential complainant. Both of these factors tend to be lacking in many jobs that young people have.

Questions have sometimes been raised about potential disemployment effects of antidiscrimination laws and affirmative action programs. By raising black youths' wages, have they reduced employment? Freeman and Holzer (1985) reply to this question by noting that the laws and programs are intended to change the demand for labor, not wages: they assume nondiscrimination in wage setting and attempt to increase the demand for minority and female workers. According to Freeman and Holzer (1985) the most reliable assessments of the effects of affirmative action programs indicate that the programs do increase employment of these groups, although this claim has been disputed in the economics literature.

Demand for Military Personnel

Service in the military has long been an important employment experience for young males, although the proportion of youths serving in the armed forces has been declining since the late 1960s. Despite this decline, the availability of employment in the military is important for some groups of the youth population. In 1984, 9 percent of nonwhite males aged 18-24 were in military service; the total number of approximately 224,000 is quite substantial when viewed in perspective with the number of nonwhite male youths of the same age who were employed in civilian occupations (1.1 million). Changing patterns of military service by different racial groups masked some of the differential in civilian employment between black and white youths. During the 1970s white youths' participation in the military declined substantially while black youths' participation remained approximately constant (Ellwood and Wise, 1983). If, after 1972, the proportion of black youths in the military had declined in proportion to the white decline, the proportion of black youths without work in 1982 would have have risen by about 3 percent (Mare and Winship, 1983). (Participation in military service by females involved only 0.6 percent of white females and 1.4 percent of nonwhite females in 1984.)

Factors Affecting the Supply of Labor

Demographic Trends

During the 1970s several demographic trends might have affected youth employment. First, and most prominent, was the entry of the massive baby-boom generation into the labor force. Theory suggests that as the supply of young workers rises relative to the supply of both older workers and other factors of production, youth wages or employment will fall relative to that of older workers. Indeed, in a cross-sectional analysis of standard metropolitan statistical areas, Freeman (1982) found that as the youth share of the population increased, employment prospects declined by a moderate amount, particularly for those aged 16-17. However, analysis by Wachter and Kim (1982) suggests that, at a national level and over time, the primary effect appears to have been on wages. For example, as shown in Tables 2.2a and 2.2b, during the period of rapid expansion of the youth labor force, 1957 to 1978, the employment-to-population rate for white youths stabilized or actually increased. In contrast, Table 2.8 shows that during the 1970s the wages of white youths declined relative to adult wages. Whatever the effects of this large demographic bulge, it did not overcome other factors tending to raise the employment-to-population rate for white youths, but it may have played a role in lowering their relative wages. Among black youths, however, the pattern appears different: relative wages over those years declined by less than those of white youths, but unemployment rose and employment rates fell substantially.

Two other factors increased the supply of labor during the same period: the sharp and continuing rise in the labor force participation of adult women (see Hahn and Lerman, 1983) and the influx of immigrant workers into the United States. Each of those groups might draw jobs away from youths if they enter the labor market in part-time or low-skill jobs (particularly if employers prefer to discriminate in their favor or can pay lower wages to these groups). It is possible that increased numbers of women in the labor force may have worsened the employment prospects and lowered the wage rates of youths (Borjas, 1983), although there have been few studies of such effects. Estimating the employment interactions between youths and immigrants has been difficult because of the lack of reliable data on the illegal component of the immigrant work force. However, Freeman and Holzer (1985) report that there is no evidence to support the view that increases in the Hispanic population (which accounts for a substantial number of immigrants) have hurt job opportunities for black youths, since black youth unemployment rates are similar in cities with large and small Hispanic populations.

A fourth demographic development of considerable importance is the change in childbearing and marital patterns in the youth population. During the 1970s there was both a decline in the rate of marriage among youths and an increase in divorce among those who did marry. It is possible that these changes might increase the supply of female labor. While childbearing declined sharply among young married women, it did not decline among unmarried women. Births to unmarried women tripled as a share of all births between 1960 and 1979 (although their number did not rise). In 1983 among married and unmarried women aged 18-24, there were 965 births per 1,000 female high school dropouts and 506 births per 1,000 female high school graduates who did not attend college (U.S. Bureau of the Census, 1984:Table 4).

Since young, unmarried women with children have disproportionately lower incomes and consequently may have difficulty obtaining affordable child care, they may have more difficulty in finding and holding jobs than other young people. However, while the magnitude of this effect has not been estimated for youths, there is evidence that lack of satisfactory child care is a restraint on women's employment (Presser and Baldwin, 1980). (As noted in Chapter 1, research on this important topic should be encouraged.)

As we noted above, there has been a substantial expansion of the youth labor supply over the last several decades, resulting from changes in birth rates during the immediate postwar period and substantial increases in the number of young women who entered the labor market. To the extent that an excess of "supply" is (by definition) a prerequisite for unemployment, it is prudent to ask whether this growth in the supply of young workers will continue in the next decade.

Since one aspect of such a forecast involves making assumptions about the future decisions of millions of young women, any answer would be quite speculative. It may not be unreasonable to expect the rate of female participation in the labor force to approximate that of men, but it may also not be unreasonable to speculate that traditional patterns will die hard, thus restraining further large jumps in the rate of female participation in the labor market.

There is, however, one aspect of a forecast about which we do have some "hard" evidence: the 1990s "supply" of teenagers has already been born, and barring massive changes in death rates or patterns of migration, one can venture a prospective count of their numbers. Figure 2.1 shows the actual and projected size of the older teenage population for 1960-2000. For the period 1960 through 1982, this segment of the population grew from roughly 13 million to more than 21 million in 1980 and then began to decline. In 1982 the population aged 15-19 totaled

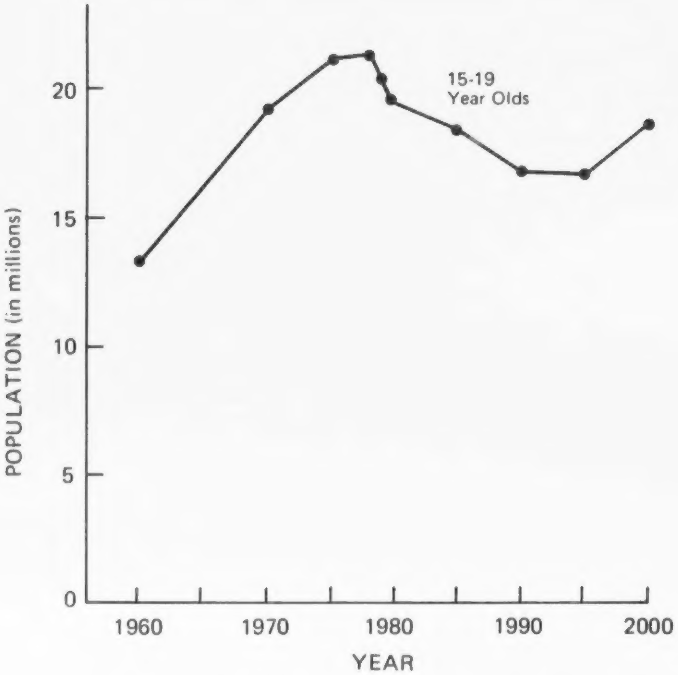


FIGURE 2.1 Actual and projected trends in the youth population aged 15-19, 1960-2000.

NOTE: The 1970 and 1980 figures are population counts from decennial censuses reported in U.S. Department of Commerce (1985:Table 30). The 1960 figures are population counts from the 1960 decennial census as reprinted in Bureau of the Census (1973:Table 189). The 1975, 1981, and 1982 figures are estimates based on Current Population Survey sample surveys of population as reported in Bureau of the Census (1979, 1982). The 1985-2000 figures are population projections (middle series) made by and reported in Bureau of the Census (1982).

19.8 million. When the size of this population group is projected to later years, it shows continuing declines through 1995; at that time it is roughly 80 percent of its peak (1980) size. Thus, on the supply side, the demographic projections indicate that there will be a steady decline in the number of potential participants in the labor market through 1995.

Enrollment in School

Changes in school enrollment patterns could have a direct effect on the measured extent of unemployment problems among youths (Hahn and Lerman, 1983). During the 1960s and 1970s, the enrollment rates for white males declined somewhat and those for white women and blacks of

TABLE 2.9 Percentage of Persons Aged 16-24 Enrolled in School, by Race and Sex

Group	1964	1974	1983
White males	51.0	45.8	44.7
Nonwhite males	39.4	48.5	45.4
White females	36.4	39.1	40.7
Nonwhite females	34.1	38.6	40.9

SOURCE: Data from Bureau of Labor Statistics (1982, 1984).

both sexes increased (see Table 2.9). The difference in the patterns of school enrollment between blacks and whites contributed in part to the growing differential in employment-to-population ratios between black and white youths (Freeman, 1980). The declining school enrollment rate of whites would tend to increase their employment rates since the employment rate for those out of school is generally higher than that for those in school. However, most of the increased employment for young whites in the past two decades came from rising employment rates for in-school youths.

More interesting than the question of enrollment status is the degree to which educational attainment has an effect on the labor market experiences of youths. Many studies indicate that dropouts have a more difficult time in the labor market than do high school graduates. These effects are seen in difficulties in obtaining the first job, in duration of unemployment between jobs, and in wage rates. Academic performance appears to be positively related to both number of weeks employed and wage rates for youths. Other studies find that vocational training in high school appears to be unrelated to employment and wage rates, while there are some indications that vocational training _after_ high school may have some positive effects (Freeman and Wise, 1982).

These findings on the effects of education on employment experiences may help to explain the distribution of employment and unemployment among youth groups, but they do not appear to help to explain the growing differential between black and white youths. One explanation that has been put forward is that differences in the quality of education are responsible for the growing differential. The validity of this explanation is difficult to test. Studies of functional literacy do show that literacy rates are lower among blacks than among whites, but there is no indication that this gap has widened over recent years. Similarly, while there has been some overall decline in the Scholastic Aptitude Test (SAT) and other test scores, there is no indication that racial differentials in test scores have increased over time (Hahn and Lerman, 1983).

Youths' Expectations and the Reservation Wage

The "reservation wage" of a person is defined as the lowest wage at which that person would be willing to take a job. It has been suggested that some of the employment problems of youths may be related to a reservation wage that is too high. In addition, some analysts argue that increasing incomes throughout the society have caused the level of the reservation wage to rise over time to a greater degree than warranted by the increasing skills of the labor force.

Data on reservation wages have not been collected over long enough periods of time for conclusions to be drawn as to whether rising reservation wages have been a major cause of increased unemployment for younger workers. On the whole, recent studies find (e.g., Freeman and Holzer, 1985) that the reservation wages of unemployed younger workers appear on average to be quite realistic: both white and black youths appear to have reservation wages that are quite close to the prevailing federal minimum wage.

While the reservation wages of white and black male youths are about the same, Freeman and Holzer suggest that the fact that the employment prospects for blacks are worse means that their reservation wages are higher relative to the actual wages they are likely to be able to obtain. And reservation wages for specific low-wage jobs are generally lower for blacks than for whites. Reservation wages of young blacks appear to have the effect of lengthening the period of nonemployment but also of increasing subsequent wages. The reservation wages of young whites have somewhat less effect on the duration of nonemployment but greater effects on their subsequent wages.

Summing Individual Effects

Thus far we have been serially reviewing possible causes of the trends in youth employment problems within a framework of demand and supply factors. Two sets of researchers, Ellwood and Wise (1983) and Mare and Winship (1983), have independently sought to bring together most of the factors covered above in a consistent accounting framework in order to see what proportion of the growth in the gap in black/white youth employment rates can be explained by the sum of the individual effects of all the factors. Though their accounting frameworks are quite different, both sets of researchers conclude that they can account for only about 50 percent of the diverging racial employment patterns among youths in the 1970s.

In discussing each factor separately we have also not touched upon possible (nonadditive) interactions among factors; such interactions might yield results that are different from the simple sum of each individual factor. Two hypothetical examples can illustrate such interactions. It was previously noted that increases in the supply of young workers seem to be related to increases in employment rates and decreases in wages (relative to adults) for young white males, but they seem to be related to sharp decreases in employment rates and smaller relative wage decreases for young black males. These differences might be due to the interaction of the increased supply of labor and the existence of minimum wage rates and increased civil rights enforcement and affirmative action programs. The wages of young black males were already closer to the minimum wage than were those of young whites, so when the youth labor supply increased employers had less room to compress black wages than white wages. [Hall (1982) suggests this possibility in his commentary on the research of Wachter and Kim (1982).]

A second possible interaction is between the demographic increase in supply and employer discrimination. Even if the desire to discriminate on the part of employers was not increasing during recent decades, the increase in the supply of both young whites and blacks may have increased the scope for the exercise of discriminatory hiring by employers.[5] This theoretical possibility was emphasized in the earliest exposition of an economic theory of discrimination by Becker (1957).

While these higher-order interactions generate interesting hypotheses, they are extraordinarily difficult to assess empirically, particularly when they involve such factors as the minimum wage or discrimination, which have proved challenging to assess even as singular first-order factors.

Other Influences on Youth Employment

Several research findings do not fit neatly into the supply and demand framework we have used in the preceding sections of this chapter. We note several of these briefly and then turn to a discussion of social context.

Family Influences and Teenage Experiences

Family background has a positive relationship to the probability that a young person is employed, and Meyer and Wise (1982) find that an increase of $5,000 in parental income is associated with an increase of more than three weeks in the number of weeks worked by teenagers.

Other family structure factors do seem to affect employment probabilities (see Rees and Gray, 1982; Corcoran, 1982). Youths with siblings working are more likely to be working themselves, suggesting the importance of family connections for information or role models.

---

[5] Similarly, in the increasing concern with civil rights and affirmative action there may have been greater pressure for equal wage treatment, leading employers to make more of their adjustment to increased supply by decreased hiring of blacks. Freeman (1985) rejects this hypothesis, arguing that affirmative action increases relative employment of blacks by punishing discrimination in employment as well as in wage setting.

Youths from female-headed families or families on welfare have slightly lower probabilities of being employed.

A somewhat surprising and potentially important finding in several studies (e.g., Meyer and Wise, 1982; Stevenson, 1980) is that there is a strong relationship between hours worked while in high school and later employment and wage rates. Whether the relationship is really causal or simply correlative (i.e., due to a common underlying factor such as motivation) remains unclear. Obviously, for those interested in the potential benefits from employment and training programs for in-school youths, this finding is intriguing.

A final finding that has drawn the attention of many analysts is that the long-term (i.e., 4-5 years later) effects of unemployment during younger years appear to be rather less than had been previously suggested. Once individual characteristics have been controlled for, the experience of early unemployment does not appear to raise the probability of unemployment in the following 4-5 years. This result appears to hold for both young men and young women (Ellwood, 1982; Corcoran, 1982). In addition, once individual characteristics are held constant, initial wage levels seem to have little relationship to wage levels 4-5 years later. These relatively encouraging findings about the limited effects of early unemployment and wages are, however, counterbalanced by another finding: early unemployment experience *does* seem to affect wage levels 4-5 years later, and this effect appears to be stronger and more substantial for youths with lower levels of education.

Social Context

We conclude by noting a final factor that may strongly influence the employment experiences of young minority youths: the social context that has formed their perceptions and responses. We have chosen to discuss this issue of social context in the final part of this section because it affects both the supply and the demand for labor and because the effects may be strong. The residue of past and current discrimination finds its expression on the demand side in diminished opportunities for minority youths in the labor market (because of the attitudes of employers); and, to the extent that the social context affects the perceptions, attitudes, and responses of youths, it can have a quite fundamental impact on the supply of labor.

The long history of the exclusion of blacks from social and economic power, government, and prestigious occupations affects youths in many ways. As Ogbu (1985a, 1985b) has observed in his study of minority youths in Stockton, California, there is a racial or castelike stratification between blacks and whites that historically found expression in such things as job ceilings for black workers. A pilot project by Culp and Dunson (1983) finds evidence of such stratification in the treatment of matched young black and white "auditors" who applied for jobs at firms in the Newark, New Jersey, area. The auditors were recent high school graduates who were trained to make systematic observations of their treatment. Although the study was only a pilot project and the samples were too small for statistical testing, the results suggested that black youths may be treated with less courtesy and may be less likely to be informed of job prospects (Culp and Dunson, 1983). Other independent anthropological studies (e.g., Ogbu, 1985b) have found evidence of negative stereotyping of low-income blacks.

The collective adaptation of black youths to this and other features of a stratification system may be a source of the disproportionate rates of black school failure and unemployment. In the face of bleak future prospects, diligence in school may not appear to be adaptive to social reality, but rather may be seen as "doing the white man's thing" (Ogbu 1985a; Anderson, in this volume; and Foster, 1974).

The castelike stratification of minorities has effects beyond those of youths' perceptions. The historic exclusion of minorities from some occupations deprives them of the chance to learn the requirements of such employment and to undertake the necessary preparation. Minority children will be limited in their opportunity to observe role models pursuing such occupations, and parents, having been excluded by past discrimination, will often be unable to guide and advise their children on the preparations required for such occupations. This may result in a dearth of knowledge on the part of the child and entirely inappropriate preparation for desired "mainstream" occupations. In one study (Ogbu, 1985a), it was reported that black high school students desiring to become doctors, engineers, and teachers were as likely to take shop courses as those desiring office work. Similarly, minority youths who aspired to be engineers took no more mathematics courses in high school than youths wishing to become physical education teachers. What such findings make clear is not only that children did not learn about the requirements of those occupations in their home environment, but also that the schools did little, if anything, to convey crucial information.

Anderson (in this volume) emphasizes the increasing significance of class factors in determining the social context in which black and other minority inner-city youths are raised. The substantial increase in the size of the black middle and upper classes in recent years has resulted in greater residential dispersion of higher-income blacks within the metropolitan area: black inner-city communities have experienced a loss of leadership and important role models that has contributed to the problems faced by the remaining youths.

DEVELOPMENTS SINCE 1980

As the Youth Employment and Demonstration Projects Act (YEDPA) programs ended in 1981, the U.S. economy had begun its descent into the worst recession since the 1930s. The economy bottomed out at the end of 1982 with overall unemployment at a post-World War II high of 10.8 percent. The unemployment rate of youths aged 16-19 was more than double that at 24.5 percent.

The greater sensitivity of youth employment to the business cycle noted previously can be seen for this period as well in the data on employment-to-population rates given in Table 2.10. In 1978 the

TABLE 2.10 Employment-to-Population Rates for Total Civilian Population and for All Civilian Youths Aged 16-19, 1977-1984

Year	Employment-to-Population Rate All Civilian Workers (1)	 All Youths Aged 16-19 (2)	Ratio (1)/(2)
1977	57.9	46.1	.796
1978	59.3	48.3	.814
1982	57.8	41.5	.718
1984	59.5	43.7	.734

SOURCE: U.S. Department of Labor (1985:Table B-12).

employment-to-population rates for all civilian workers (column 1) was 59.3, while the employment-to-population rate for youths aged 16-19 was 48.3 (column 2); hence, the youth rate was 81.4 percent of that for all workers (column 3). By 1982 the employment-to-population rate for all workers had fallen sharply, to 57.8, but the rate for youths had fallen even more precipitously, to 41.5, so that the youth rate was only 71.8 percent of the rate for all workers. It is also of some interest to note that in 1982 the employment-to-population rate for all workers was at about the same level as in 1977 (57.8 and 57.9), but the youth rate was considerably lower in 1982 than in 1977 (41.5 compared with 46.1). For black youths the employment situation in 1982 was disastrous: their employment-to-population rate was only 19.0 percent.

The economic recovery began in 1983 and continued through 1984. On the upswing youth employment again showed greater sensitivity so that by 1984 the youth employment-to-population rate had recovered more than that for all workers: it was 73.4 percent of the rate for all workers (compared with 71.8 percent at the bottom of the recession in 1982). However, if one compares the situation in 1984 with that in 1978, it is clear that, despite the recovery, the youth employment-to-population situation has deteriorated both absolutely--from 48.3 in 1978 to 43.7 in 1984--and relative to the rest of the labor force--from 81.4 percent of the rate for all workers in 1978 to 73.4 percent in 1984.

If one looks back to Tables 2.2a and 2.2b, it is apparent that the employment-to-population rate for nonwhite males (both those aged 16-19 and 20-24) is not only worse in 1984 than it was in 1978 but has further deteriorated relative to white male youths, while the employment-to-population rates of nonwhite females remain the lowest of the youth groups.

These very summary data indicate both that, as would be expected, the recession hurt youth employment seriously and also that even with the economic recovery youth employment problems remain very serious.

Compared either with 1977, just before YEDPA started, or 1978, the first year of the program, the youth employment problem in 1984 was as bad, or worse. Even more disturbing, the employment situation of black youths, particularly males, has worsened even more relative to white youths, apparently continuing the long-term trend observed up to 1978.

While our committee has not tried to assess systematically the economic outlook for the future and its implications for youth employment problems, we do wish to comment on one feature that has sometimes been pointed to as a possibly important sensitive development, namely, the decline in the absolute size of the youth cohort. In the previous section, it was noted that one of the possible causes of youth employment problems was the massive, unprecedented rise in the size of the youth cohort, both absolutely and relative to the adult worker population (shown in Figure 2.1). Over the 15 years from 1980, when the size of the youth population reached its absolute peak, to 1995, the youth cohort will decline from 21 million to about 17 million. It has been suggested that this decline will significantly improve the employment situation for youths.

We have two observations to make about this suggestion. First, while there are some indications that the youth demographic bulge may have contributed to youth employment problems, the evidence is by no means overwhelming. If it is hard to find the effects of this dramatic bulge in relative supply on youth employment problems, it seems unwise to count on the decline in relative supply of youths to have overwhelming effects in reducing youth employment problems over the next decade. Second, by 1985 two-thirds of the total projected decline in the size of the youth population will have occurred. The figures just reviewed above give no indication that this relative supply effect is currently having a substantial impact on youth employment problems. If reductions in relative supply of youths have been having some positive effect, they have not been substantial enough to overcome other negative factors.

POSTSCRIPT

When focusing on the youth unemployment problem, there is a tendency to lose sight of the fact that the majority of teenagers find jobs relatively easily and that, when they leave or lose one job, they often find another without a long period of unemployment. As Freeman and Wise (1982) observe: "constant references to the youth employment problem, as if all or the majority of young persons had trouble obtaining jobs, appear to misinterpret the nature of the difficulty. Youth joblessness is in fact concentrated among a small group who lack work for extended periods of time."

The vexing problem about the "youth unemployment problem" is that for some groups of youths--disproportionately black youths--finding any job, remaining employed, and finding a new job when necessary is a major and continuing difficulty. Throughout this chapter, it has become apparent that blacks suffer inordinately from unemployment. But while table after table has shown a widening gap between white and black unemployment, inactivity, etc., it is not only the black population among whom unemployment is concentrated. In 1978 Hispanics experienced long-term unemployment at 1.3 times the rate of the population as whole, children from poverty families at 1.6 times the national rate, and those living in inner cities at 1.4 times the national rate (Congressional Budget Office, 1982).

It was against this background that Congress enacted YEDPA in 1977. This act instructed the Secretary of Labor "to establish a variety of employment and training programs to explore the methods of dealing with the structural unemployment problems of the Nation's youth." In the following chapters we review the implementation and effects of these programs. In Chapter 3 we describe the YEDPA programs and their implementation. In Chapters 4 through 9 (and related appendixes), we review the effectiveness of those programs and the scientific adequacy of the research which was conducted to evaluate them.

3

Implementation of the Youth Employment and Demonstration Projects Act

In July and August of 1977, under strong political pressure, Congress passed and President Carter signed the Youth Employment and Demonstration Projects Act (YEDPA). The law (P.L. 95-93), initiated by Congress, substantially increased authorizations for two existing youth employment programs that were part of the Comprehensive Employment and Training Act (CETA), the Job Corps and the Summer Youth Employment Program (SYEP), and created four new programs, the Youth Community Conservation and Improvement Projects (YCCIP), the Youth Employment and Training Program (YETP), the Young Adult Conservation Corps (YACC), and the Youth Incentive Entitlement Pilot Projects (YIEPP), a national demonstration program designed to encourage dropouts to return and potential dropouts to remain in school using guaranteed work as an incentive.

The broad purpose of the legislation as a whole was to provide employment, training, and demonstration programs aimed at the structural unemployment problems of youths. The more specific purpose of the demonstration programs was "to test the relative efficacy of different ways of dealing with these problems in different local contexts." This charge was backed by substantial discretionary authority and money, granted to the Secretary of Labor and delegated to the Office of Youth Programs, to conduct research, demonstration, and evaluation activities. In addition to the substantial funds for YIEPP, both YCCIP and YETP included discretionary funds for demonstration programs. This demonstration purpose, however, was not to preclude the provision of employment and training programs aimed at the immediate employment needs of youths.

Under YEDPA annual outlays for youth programs were double what they had been in previous years. In fiscal 1977, the year before YEDPA began operations, federal outlays for youth employment programs totaled $955 million and served 1.2 million youths.[1] Beginning in 1978 annual outlays for youth programs averaged $2 billion and served an average of 1.5 million youths per year. Over the next 4 fiscal years, from 1978 through 1981, YEDPA outlays totaled $8 billion and served 6.1 million youths. Although large compared to previous efforts, on a per-participant basis annual expenditures averaged only $1,311.

---

[1] These were programs serving youths only. Additional expenditures of $827 million served another 0.8 million youths in adult programs under the Comprehensive Employment and Training Act; these programs continued during the YEDPA years.

Of the total $8 billion, $628 million was spent for discretionary and demonstration projects, including both the operation of the youth programs (which accounted for most of the expenditures) and the accompanying research and evaluation activities. This outlay is one of the largest short-term investments in social research and demonstration ever undertaken by the federal government. The scale and complexity of its research activities, imposed on a massive service delivery system, created competing functions that had major consequences for both the research effort and program operations. The research program, designed to provide a "knowledge base for improving youth employment policies," is the basis of this report's review of program effectiveness.

This chapter provides a context for interpreting the results of YEDPA programs and research in terms of the conditions under which the act was legislated and implemented. This context is considered in four sections: the legislative background of the act; the national implementation of YEDPA programs; the local implementation of YEDPA programs and research activities; and the implementation of the knowledge development research effort. This chapter relies heavily on the background paper by Richard Elmore, "Knowledge Development under the Youth Employment and Demonstration Projects Act" (in this volume).

LEGISLATIVE BACKGROUND OF YEDPA

Shortly after the inauguration of President Jimmy Carter in 1977, at the instigation of several senior Senators of both parties, discussions were held with new administration appointees regarding a new youth employment bill, several proposals for which had been circulating in the Senate. With the cooperation of presidential appointees in the Department of Labor, a joint Senate-administration proposal was drafted and introduced. The proposed legislation contained several key elements, representing the interests of its various Senate sponsors: a focus on school dropouts and those at risk of dropping out of school; improved cooperation between schools and the employment and training system; and job training and work opportunities that would prepare youths for work in "the real world" and provide them access to jobs.

Despite its involvement in the youth employment bill, the Carter administration's real domestic priority at that time was elsewhere, on controlling inflation and rising unemployment. To deal with the latter, the $20 billion emergency economic stimulus package that the President introduced immediately after his inauguration created $8 billion in additional public service jobs as part of the CETA program. One result of this approach was to increase the emphasis in the Employment and Training Administration (ETA) of the Department of Labor on public employment. The burden of this massive public jobs program at the local level and the public image it created of CETA were to become issues in both the local operation of YEDPA and its reauthorization as a part of CETA.

With its attention elsewhere and without a specific youth proposal of its own, the administration accepted the Senate version of the youth employment bill. The joint Senate-administration proposal requested authorization for the establishment of three new youth programs, the Young Adult Conservation Corps, the Youth Community Conservation Improvement Program, and the Youth Employment and Training Program; it provided for joint projects by schools and CETA prime sponsors; and it provided for a large discretionary budget (50 percent of YETP), as a mechanism to adjust the formula-funded allocations to the needs of various constituencies. The House of Representatives, having been left out of the early negotiations, introduced the Senate-administration bill and then immediately proceeded to write its own alternate youth proposal.

Common to both Senate and House proposals was an initial 1-year authorization. With the entire CETA legislation due to expire in 1978, the plan was to integrate the youth programs into CETA in a 1978 reauthorization bill. The House proposal, like the Senate one, also included discretionary demonstration activity, but as a mechanism to learn what programs work best and to apply that knowledge in later youth program legislation.

The House bill's emphasis on research and demonstration was its hallmark, indicating uncertainty about what types of programs would most effectively address the problems of youth unemployment and a commitment to research and experimentation as a basis for future program planning. One of the purposes of the demonstration approach was to prevent funds from being locked into certain programs that research might suggest were not effective. This approach was in marked contrast to the Senate proposal, which would more firmly establish new youth programs. Another key difference between the House and Senate proposals was the House's Youth Incentive Entitlement Pilot Project (YIEPP), a program designed to bring dropouts back into school and prevent others from dropping out by guaranteeing a job on the conditions of school and job performance.

Despite a lack of clarity about the demonstration programs, the Senate conceded to the House's approach. The Conference Report, which stated the terms of compromise between the House and Senate versions of the bill, used the House language in stating that the purpose of the law was the "establishment of pilot, demonstration and experimental programs to test the efficacy of different ways of dealing with the problem of youth unemployment;" however, the report also stipulated that the statement of purpose contain language "specifying that a variety of employment and training programs, as well as demonstration programs, are authorized" (U.S. Congress, 1977:35). Thus, Congress avoided conflict between the two fairly distinct approaches by adopting both, i.e., research and demonstration together with new and large-scale service programs.

Several less contentious issues, representing the interests of both the Senate and the House, were addressed in the compromise bill: increased cooperation, through the YIEPP (entitlement program) and a joint CETA-education set-aside between the CETA and educational systems as a means of addressing the dropout problem; involvement of labor organizations in youth programs, in particular in developing and restructuring job classifications, as a means of preventing wage and job displacement of adult workers by youth programs; involvement of community-based organizations (CBOs) and other local, state, and nationally organized groups in the planning and delivery of YEDPA programs, as a means of maintaining constituency support in the CETA system; and involvement of other federal agencies in the administration of YEDPA programs as a means of coordinating diverse federal activities around the youth employment issue.

In its final form the YEDPA legislation was an assemblage of the many and somewhat divergent congressional interests from which it originated. It charged the Department of Labor with two functions: to conduct research and demonstration projects in coordination with diverse federal, state, and local organizations, in order to find out what methods work best for youths; and, at the same time, to mount large-scale new programs to meet the immediate employment needs of youths. YEDPA provided substantial resources and discretionary authority; specification of whom to serve, but little guidance as to how; and a one-year time limit.

THE IMPLEMENTATION OF YEDPA NATIONALLY

Several conditions that characterized the CETA system during the period of YEDPA implementation and early operations strained the capability of the system nationally and locally to both administer regular CETA programs and mount the new YEDPA programs. These conditions also limited what could reasonably be expected from YEDPA's rather ambitious research and demonstration agenda.

The passage of YEDPA in 1977 represented a reversal of the control of employment and training programs granted to local prime sponsors 4 years earlier. With the enactment of CETA in 1973, Congress had effectively turned federal employment and training programs over to local control by changing from categorical to block-grant funding. This grant of authority to states and localities was reinforced in other federal programs as categorical programs were switched to block grants. The YEDPA legislation, with its increased program requirements and target group specifications, challenged this (relatively new) control of local prime sponsors over which parts of the youth population to serve and how. It also significantly increased their workload as new reporting requirements for these programs were imposed on a system geared to different requirements.

In addition to the YEDPA mandate to serve specific target groups of youths, which many considered a recategorization of youth services, YEDPA required that prime sponsors also maintain services to youth participants in regular CETA programs at their previously established levels. Many state and local administrators perceived this effective increase in services to youths as disproportionate when other subgroups were also in need of services. Although YEDPA substantially increased resources at the local level, it also increased federal management, through program and reporting requirements, and reduced local flexibility in determining the allocation of services to various target groups. The net effects at the local level were increased competition between YEDPA and regular CETA resources and a burdening of the system as it tried to manage two types of programs with different administrative and operating requirements.

At the same time that YEDPA was being implemented, CETA prime sponsors were facing another new demand. As noted above, the President's emergency economic stimulus package had substantially increased CETA's Public Service Employment (PSE) Program, more than doubling the number of public service jobs. Locally, the management demands of PSE competed with YEDPA and regular CETA for limited staff time and resources. Nationally, PSE created an image of CETA as a public jobs program, dwarfing the less visible training programs, and subsequently, because of various reports of fraud and abuse in the PSE program, damaged support for CETA in general.

These conditions prevailed through the first year of YEDPA operations and as the 1978 CETA reauthorization proceedings began in Congress. At the same time, the administration's focus on the PSE program and welfare reform had effectively pushed YEDPA into the background at the Department of Labor. It was not until late 1978, after the demise of the Carter welfare reform proposal and the public outcries over misuse of PSE funds, that youth employment came into public focus. Then, with YEDPA already under way, the President created the Vice President's Task Force on Youth Employment, giving the issue top domestic priority for the 1980 election. This dramatic shift in the administration's focus on youth employment was to have significant effects on the administration of YEDPA, particularly on the research and demonstration activities, which were expected to inform the Vice President's Task Force in its 1980 report to Congress.

YEDPA Expenditures and Participation

YEDPA mandated four new programs and expansion of the two existing CETA youth programs, the Job Corps and Summer Youth Employment Program. In 1978, three of the four new programs, the Youth Employment and Training Programs, the Youth Community Conservation and Improvement Projects, and the Youth Incentive Entitlement Pilot Projects were reauthorized as an amendment to Title IV of CETA, along with the Job Corps and SYEP. Under the Office of Youth Programs, which had been created in the Employment and Training Administration to administer youth programs, the Job Corps and SYEP were incorporated in the YEDPA effort. The Young Adult Conservation Corps, which was reauthorized under Title VIII because it was not directed principally at disadvantaged youths and because of its operation by other federal agencies, remained separate from the larger YEDPA effort.

Each of these youth programs represented a different approach to the problem of youth employment and included programs and services designed to meet the needs of the particular youth groups. Table 3.1

TABLE 3.1 Youth Programs Administered Under YEDPA, 1978-1981

Program	Target Group	Activities/Approach	Administration
Youth Employment and Training Programs (YETP)	14-21, at least 85 percent economically disadvantaged, in-school and out-of-school youths	Classroom or on-the-job training, work experience, pre-employment skills, emphasis on transition from school to work	Three-fourths of funds administered on formula basis to all CETA prime sponsors, including 22 percent earmarked for cooperative programs with local educational agencies; about one-fifth of funds for discretionary research and demonstration
Youth Community Conservation and Improvement Projects (YCCIP)	16-21, unemployed, out-of-school disadvantaged youths	Supervised work in projects serving community needs; emphasis on building trades and conservation	Three-fourths of funds administered on formula-basis to all CETA prime sponsors, about one-fifth of funds for discretionary research and demonstration
Youth Incentive Entitlement Pilot Projects (YIEPP)	16-19, economically disadvantaged in-school and dropout youths	Demonstration of a 2-year job guarantee designed to increase return, retention, and completion of high school conditional on satisfactory performance in school and work	A national experiment operated through federally selected sites in 17 prime sponsor locations
Young Adult Conservation Corps (YACC)	16-23, out-of-school unemployed but not necessarily disadvantaged youths, residing in areas of high unemployment	Work for up to 1 year on conservation projects on public lands and waters; emphasis on accomplishing needed conservation projects	Operated by Departments of Agriculture and Interior in consultation with Department of Labor; 70 percent of funds allocated to federal and 30 percent to state programs
Job Corps	16-21, economically and severely disadvantaged out-of-school youths, who could benefit from supportive residential environment	Residential program of vocational skills training, remedial education, health care, counseling, and other support services	National program administered in cooperation with Departments of Interior and Agriculture, through contracts with states, regional offices, and nonprofit organizations
Summer Youth Employment Program (SYEP)	14-21, economically disadvantaged youths, both in-school and out-of-school	Summer work experience in public or private nonprofit agencies with some educational enrichment	National formula-funded program operated by CETA prime sponsors

TABLE 3.2 YEDPA Expenditures and Participants

Year	Expenditures (in millions)	Participants (in thousands)
1978	$1,465	1,558
1979	2,048	1,546
1980	2,330	1,551
1981	2,294	1,389
Total	$8,137	6,043

SOURCE: Data from U.S. Department of Labor (1979, 1980, 1981, 1982).

describes the target group, program approach, and administration of each of these youth programs. Table 3.2 shows YEDPA expenditures and the number of youths served from fiscal 1978 through the termination of YEDPA in 1981. As shown in Table 3.2, outlays increased substantially every year, peaking in 1980, while enrollments were steady until 1981 when YEDPA programs were being terminated.

By themselves, the YEDPA outlays and participant levels describe a rise and fall in activity level as expected over the lifetime of a program. When measured against the CETA totals for the same period, however, it is apparent that over its lifetime YEDPA accounted for an increasing share of employment and training activities. Table 3.3 compares federal outlays for all CETA titles with those for YEDPA during the same years. As total CETA expenditures declined, YEDPA outlays increased, from 16 percent of the total in 1978 to 30 percent

TABLE 3.3 YEDPA Expenditures Compared With Total CETA Expenditures

Year	CETA (billions)	YEDPA	
		Billions	Percentage
1978	$9.5	$1.5	16
1979	9.4	2.0	21
1980	8.9	2.3	26
1981	7.7	2.3	30

SOURCE: Data from U.S. Department of Labor (1979, 1980, 1981, 1982).

TABLE 3.4 Comparison of Total and Youth Participants in Employment and Training Programs

	Participants		
	Total	Youths	
Year	(millions)	Millions	Percentage
1978	4.3	2.2	51.2
1979	4.0	2.5	62.5
1980	3.6	2.3	63.9
1981	2.9	2.0	69.0

SOURCE: Data from U.S. Department of Labor (1979, 1980, 1981, 1982).

in 1981. Similarly, YEDPA participants accounted for an increasing share of program participants, from 37 percent in 1978 to 48 percent in 1981. When the number of youths served in adult-oriented CETA programs is added to the totals for the youth-only programs (the four YEDPA programs, Job Corps, and the Summer Youth Employment Program), the percentage of employment and training slots allocated to youths becomes even larger. Table 3.4 compares the total number of participants (adults and youths) in all titles with the total number of youths in all titles. During the YEDPA period, the number of youths as a percentage of total participants increased from 51 percent in 1978 to 69 percent in 1981; the majority of these youths, 60-70 percent, were enrolled in YEDPA programs.

Tables 3.5 and 3.6 show expenditure and participant levels, respectively, for each of the six youth programs for fiscal 1978 through fiscal 1981. In the four new YEDPA programs, outlays almost doubled from 1978 to 1979 and peaked in 1979 and 1980. Participation in the same programs increased more gradually, but also peaked in 1979 and 1980, except for YACC, which had increased participation through 1981 (even though it had been scheduled in 1980 for a 1982 termination due to problems in implementation and placement). Increased outlays for the Job Corps under YEDPA were aimed at doubling the enrollment by fiscal 1978 to 88,000. This objective was achieved in fiscal 1979, with continued expansion of services through 1981. The summer program, which had served 1 million youths in fiscal 1977 with additional economic stimulus package funds, reached its all-time peak of more than 1 million in 1978. In the same year, educational enrichment of the summer program began, funded with discretionary money and governors' grants.

TABLE 3.5 Outlays for Federal Youth Employment Programs, Fiscal 1978-1981 (in millions)

Fiscal Year	YETP	YCCIP	YIEPP	YACC	Job Corps	SYEP
1978	$ 294	$ 61	$ 32	$ 719	$ 280	$ 670
1979	556	103	77	273	380	660
1980	695	122	88	234	470	721
1981	719	a	a	174	465	769
Total	$2,264	$410[b]	$240[b]	$1,400	$1,595	$2,820

[a] Expenditures for YCCIP and YIEPP were reported jointly for 1981 at $167 million.
[b] The totals for YCCIP and YIEPP assume that $43 million of the $167 million from 1981 went to YIEPP and the remaining $124 million to YCCIP. This assumption is based on separate budget sources stating that total outlays for YIEPP for all fiscal years were $240 million (Gueron, 1984).

SOURCE: Data from U.S. Department of Labor (1979, 1980, 1981, 1982).

Discretionary and Demonstration Projects

The Office of Youth Programs (OYP) emphasized research and demonstration as an integral part of YEDPA program operations as a means of exploring various program approaches and testing their relative effectiveness. The amounts of money to be allocated to the entitlement demonstration and to other discretionary research and demonstration activity was specified in rather complicated formulas in the YEDPA legislation (Elmore, in this volume). Based on these formulas the Office of Youth Programs structured its knowledge development plans. In fiscal 1978 and 1979, $437.3 million was allocated to discretionary demonstration and research activities, $222.2 million to the entitlement project, and $215.1 million to other discretionary projects (YETP, YCCIP, and SYEP) and research (U.S. Department of Labor, 1980a).

Although the discretionary projects emphasized research and evaluation, according to OYP most of the discretionary money was spent for the direct provision of programs and services to youths (U.S. Department of Labor, 1980a). In 1979 and 1980, 78 percent of the discretionary money was for programs and services; 6 percent was for technical assistance and linkages to support those programs; 1 percent was for the evaluation of regular youth programs (i.e., Job Corps and SYEP); 7 percent was for the evaluation of the demonstration projects; and 7 percent was for basic research on youth employment problems.

TABLE 3.6 Participation in Federal Youth Employment Programs (in thousands)

Fiscal Year	YETP	YCCIP	YIEPP[a]	YACC	Job Corps	SYEP
1978	359.2	28.7	36.8	51.9	72.0	1,009.3
1979	413.6	38.5	53.4	67.2	85.0	888.0
1980	463.0	43.0	50.0	66.5	103.8	825.0
1981	393.7	b	b	68.0	114.4	774.0
Total	1,629.5	125.6[c]	163.0[c]	253.6	375.2	3,496.3

NOTE: Participation is defined as the total number served in each fiscal year, not new enrollees served; figures include participants carried over from the previous year.

[a] A total of 76,000 youths were served in YIEPP between March 1978 and August 1980. Figures shown above include carry-overs.

[b] Participation for YCCIP and YIEPP was reported jointly for 1981 at 38,400.

[c] Totals for YCCIP and YIEPP assume that 23,000 of the 38,400 participants enrolled in 1981 were enrolled in YIEPP, and the remaining 15,400 in YCCIP. The 23,000 figure is based on Gueron (1984).

SOURCE: Data from U.S. Department of Labor (1979, 1980, 1981, 1982).

A 1985 accounting of actual expenditures for YEDPA activities indicates that the total for discretionary program operations and research was $628 million. Table 3.7 shows these expenditures by fiscal year. Overall, nearly 15 percent ($92.2 million) was for research activities, and 85 percent was for program operations (including technical assistance); these proportions are the same as those reported by OYP in 1980.

In 1978, when the majority of discretionary projects were initiated, more than 60 major demonstrations were funded in about 300 sites. The continued funding of these same projects accounted for the majority of discretionary activity through the next 3 years. YIEPP alone accounted for $240 million of the $628 million in discretionary and demonstration expenditures. In fiscal 1978 and 1979 the planned budget for YETP demonstrations totaled $135 million. The major YETP demonstration projects included an exemplary in-school youth demonstration, several career exploration and development projects, two planned variations of program approaches and service mixes, two major private sector projects, and a community service project as an alternative to regular work experience. The YCCIP budget plan for demonstrations during the same period totaled $47 million. Major projects included three conservation and community improvement projects operated through various local community organizations, two housing projects, and four projects focused on improvements in railroads, dams,

TABLE 3.7 YEDPA Expenditures for Discretionary Program Operations and Research by Fiscal Year (in millions)

Fiscal Year	Operations	Research	Total
1977-1978	$ 56.456	$ 0.418	$56.874
1979	60.386	11.323	71.709
1980	84.205	18.563	102.768
1981	81.198	46.002	127.200
1982	28.864	0	28.864
YIEPP[a]			
1978-1981	$224.3	$15.9	$240.2
Total	$535.409	$92.206	$627.615

[a]Expenditures for YIEPP provided by Gueron (1984).

SOURCE: Data provided by the Office of Information Resources Management, Employment and Training Administration, U.S. Department of Labor, April 1985.

and agriculture. Discretionary funds were also used for the SYEP enrichment projects. In 1978 and 1979 planned budgets for these totaled $34 million and supported career orientation and educational activities for summer youths.[2]

Of the 60 major demonstrations initiated in 1978 and 1979, 22 were operated through agreements with six other federal agencies: ACTION, the Community Services Agency, the National Institute of Education, and the Departments of Energy; Health, Education, and Welfare (now Health and Human Services); and Housing and Urban Development. Budgets for these projects totaled $48.8 million (see Table 3.8). The major interagency agreement in terms of total budget was YACC, operated jointly by the Departments of Interior and Agriculture and totaling $820 million. Because of its operational independence from the

---

[2] The figures presented here are based on the planned expenditures for these activities as described in the youth knowledge development report, Knowledge Development Activities for Fiscal Years 1978 and 1979 (U.S. Department of Labor, 1980). With the exception of YIEPP and total fiscal year expenditures as presented in Table 3.7, a precise accounting of actual expenditures for individual discretionary projects is not available.

TABLE 3.8 Knowledge Development Activities With Other Organizations

Organization	Amount[a] and Year Committed	Tasks
Interagency Agreements		
ACTION	$ 8,000,000 (1979)	Test feasibility of national youth service--community internships; one project
	1,311,402 (1979)	Test feasibility of transferring urban community service project to rural setting; one project
	1,298,704 (1979)	Test feasibility of one-on-one volunteers in assisting youths to find employment; 14 projects
Community Services Administration (CSA)	4,000,000 (1978-1979)	Test feasibility of youth employment in rural housing programs; in collaboration with Department of Agriculture; 13 sites
	1,200,000[b] (1978) 400,000[b] (1979)	Test feasibility and effectiveness of year-round program for out-of-school youths in community development projects; 3 projects
Health, Education, and Welfare (HEW)	1,500,000 (1979)	Test feasibility of incorporating youth employment and training into HEW-run Runaway Youth Centers; 11 projects
	1,051,000 (1979)	Establish, support, and test effectiveness projects to link post-secondary educational institutions to CETA agencies; 20 projects; administered by Fund for the Improvement of Post-Secondary Education
	4,777,700 (1978) 317,792 (1979)	Test feasibility of replicating and evaluate effectiveness of Career Intern Program in Opportunities Industrialization Center sites; 4 sites; administered by National Institute of Education (NIE)
	1,000,000 (1979)	Test feasibility and effectiveness of vocational education linked to summer work; 6 projects; administered by Bureau of Occupational and Adult Education
	632,600 (1979)	Part-time work for 1,000 Upward Bound participants; 9 projects; administered by Bureau of Higher and Continuing Education
Department of Energy	359,025 (1979)	Test feasibility and effectiveness of summer program of education and work experience in energy field
Housing and Urban Development	8,000,000 (1978)	Implement and evaluate youth employment in public housing projects as a means of crime reduction
	9,234,089 (1978) 4,479,000 (1979)	Test feasibility of youth employment in community development projects as a means of improving local communities

Intermediaries		
Manpower Demonstration Research Corporation	$115,000,000 (1978) 107,100,000 (1979)	Design YIEPP application guidelines; review applications; design evaluation; analyze results; 17 sites
Corporation for Public/Private Ventures	8,656,872 (1978)	Develop, test, and document programs for private sector employment
	10,172,243 (1978) 678,360 (1979)	Replicate community home repair program; assess its effectiveness
Youthwork	19,505,055 (1978) 2,188,358 (1979)	Identify exemplary in-school programs; design application guidelines; review and recommend local projects; assess effectiveness; 66 projects
Corporation for Youth Enterprises (CYE), through interagency agreements with Community Service Administration and Department of Commerce	$ 1,420,000 (1978)	Organize, assist, and support creation of youth-run enterprises; design demonstration projects; assess effectiveness; 7 projects
Intraagency Projects Within DOL		
Office of Policy Evaluation and Research	$ 3,999,967 (1978) 2,900,000 (1979)	Expand National Longitudinal Survey (NLS)
	800,000 (1978)	Expand Continuous Longitudinal Manpower Survey to assess impact of YCCIP and YETP on youths
	362,000 (1978)	Process evaluation of local implementation of YEDPA; contracted to National Council on Employment Policy
Assistant Secretary for Policy Evaluation and Research	265,265 (1978) 59,322 (1979)	Basic research on youth employment; contracted to the University of California, Los Angeles, National Bureau of Economic Research, and various other organizations
External Staff Support Outside DOL		
Brandeis University	250,000 (1978) 775,651 (1979)	Technical assistance in research design to exemplary projects; processes for retrieval, dissemination, and utilization of findings

TABLE 3.8 (continued)

Organization	Amount[a] and Year Committed	Tasks
Educational Testing Service	3,500,000 (1978-1981)	Creation of a uniform national data base to assess YEDPA demonstration projects; responsible for design of standardized assessment instruments, overseeing data collection, data processing and analyses, and preparation of final evaluation reports on the effectiveness of 26 YEDPA projects
National Council on Employment Policy	76,294 (1978)	Review and analysis of selected program activities, including state-of-the-art review of programs of disadvantaged youths and assessment of work-education councils
Constituency Support		
U.S. Conference of Mayors	168,100 (1978)	Identify exemplary programs; provide technical assistance to prime sponsors
National Association of Counties	130,170 (1978) 35,000 (1979)	Identify exemplary programs; provide technical assistance to prime sponsors
National Governors' Association	102,763 (1978)	Identify model state-run programs
National Urban League, Womens Bureau, SER-JOBS for Progress, U.S. Employment Service, Recruitment and Training Program, National Puerto Rican Forum, National Council for Negro Women, National Council of La Raza	8,262,633 (1978) 1,315,945 (1979)	Demonstration projects on participation of community-based organizations in school-work linkages

---

[a] These figures for fiscal 1978 and 1979 represent the total amount budgeted for each program, including program operations and services, as well as the amount paid that organization for its role in project operations.

[b] Also see CYE below.

SOURCES: Elmore (in this volume, Table 7); U.S. Department of Labor (1980b).

Department of Labor, however, YACC was not counted in the discretionary research and demonstration effort of the Office of Youth Programs.

In addition to agreements with other federal agencies, OYP turned to institutions outside the government for assistance in managing the demonstration projects and the accompanying research and evaluation efforts. Four intermediary organizations, private nonprofit corporations, were contracted to design, implement, and evaluate various types of demonstration projects. Three of these intermediaries were created expressly for this purpose, one to manage private-sector programs, another for youth enterprise projects, and the third for in-school youth programs. Together these three managed $42.7 million in discretionary funds (see Table 3.8). The fourth intermediary, Manpower Demonstration Research Corporation (MDRC), an established corporation with previous experience in demonstration efforts, managed the YIEPP.

LOCAL IMPLEMENTATION OF YEDPA

YEDPA discretionary activities, both the programs and their accompanying research, were planned and managed by the Office of Youth Programs and implemented through the local CETA prime sponsor network. The knowledge development agenda (described in the next section) was supposed to provide the structure for a coordinated, coherent plan of program and research activities. OYP's plan was to distribute the funds and implement the programs through the CETA system and then to manage and shape that system through research and evaluation. Thus, it was at the local level that the duality of YEDPA program operations and research had to be combined successfully to meet YEDPA's goals.

The first section of this chapter noted the constraints of this dual operations and research endeavor, exacerbated by the demands of regular CETA operations and the increased Public Service Employment program. This section describes in more detail the effects of this duality at the local level and the costs it may have imposed in terms of the ultimate effectiveness of YEDPA programs.

The local implementation of YEDPA programs is discussed in terms of five basic tasks: (1) planning and assembling programs; (2) targeting, recruiting, and enrolling participants; (3) staffing and organizing program activities; (4) assessing participant needs and matching them to program services; and (5) monitoring quality of programs and services. This discussion is based on reports on the implementation of several demonstration projects, case studies of implementation of formula-funded YEDPA programs, and reports on program impact that highlighted implementation issues. Although some of the projects discussed here also appear in the reviews of program effectiveness, many, due to the nature of the implementation problems, were excluded from those reviews (see Appendix B for the list of reports included in the implementation and effectiveness reviews). Since these data were not systematically collected, we do not know how representative they are of YEDPA programs and demonstration activities. Hence, this discussion is presented here as an indication of the general nature and range of the problems encountered in implementing YEDPA at the local level.

Task 1: Planning and Assembling Programs

YEDPA, with a 1-year authorization, congressionally mandated program features, and significant increases in level of program funding, put inordinate pressure on the planning and implementation of programs at the local level. The process of designing and communicating the regulations and budgets from Washington to the local level was slow and uncertain; the information needed for planning was often late getting to prime sponsors and shortened the time available for planning and assembling programs.

Uncertainties in regulations and budgets were common. Some YEDPA innovations depended on the waiver of established CETA regulations. The placement of youths in work positions in private for-profit firms, for instance, was prohibited by CETA regulation, but encouraged under YEDPA. To waive this regulation, however, each prime sponsor had to apply for permission to the national office. The approval process complicated local planning and discouraged some prime sponsors from the use of this option.

Even after the first year, budget delays and uncertainties threatened program operations with the end of almost every federal fiscal year. For example, the Employment and Training Administration's announcement at the end of fiscal 1979 that no funds could be expended in the new fiscal year pending congressional authorizations created havoc with local prime sponsors, who were forced to negotiate interim contracts, budget extensions, and make-shift arrangements with their local program operators to prevent program termination.

YEDPA broadened the base of local organizations involved in planning and operating youth programs with its requirements to involve community-based organizations, the schools, unions, and private employers. To gain cooperation and thereby ease implementation and operation, program operators tried to involve all of the major parties in the planning stage. It was assumed that such involvement in planning would expand and ease the flow of resources throughout the local service system. Planning by consensus, however, complicates the decision-making process and can undermine efforts to change the direction or nature of the service delivery system; yet such change may be desired when the existing system does not address important aspects of the problem. In the Career Intern Program, for instance, a program fraught with serious implementation problems, there were seven parties to each program decision: the Department of Labor, the National Institute of Education, the national and local offices of the Opportunities Industrialization Center (OIC), the school system, the prime sponsor, and the program evaluator.

The involvement of the school systems in planning and operating youth programs was considered an important link in local youth networks. The YEDPA legislation mandated that 22 percent of YETP funds, the largest formula-funded program, be spent in negotiated agreements with the schools. The entitlement program (YIEPP) also required close relations with the schools since satisfactory school attendance and performance was a condition of the job guarantee. In addition, several demonstration projects required agreements with schools in running alternative education and school-to-work transition projects. And, of course, schools were also an important source for the recruitment of eligible in-school youths for various programs.

The results of experiences with schools confirm in general the status quo thesis suggested above: although the 22 percent mandate did encourage the schools to collaborate with CETA, it did not change either the nature of the services provided by the educational system or the youths whom it served. The schools, although they did provide access to certain youth groups, maintained their focus on in-school youths and provided essentially the same set of educational services as usual. The lack of influence of YEDPA (or CETA) on schools may be attributed largely to the schools' resistance to allocating services according to income and to a basic difference in their perception of their mission and constituency. In addition, schools, although they benefit from CETA funds, are not dependent on them for their existence and therefore are not as willing as other organizations to adapt to CETA's short-term and unsteady funding cycles.

Results of collaboration with CBOs, also mandated by YEDPA, were similar to those with schools. Although the CBOs were more dependent on these funds than schools and therefore more amenable to YEDPA's approach, it was difficult to effect changes in their approach and in the target groups traditionally served by some CBOs, each of which had its own constituency. Moreover, because of their dependence on unsteady funding sources, many CBOs had difficulty in recruiting and retaining qualified staff.

The involvement of unions and private employers in planning and program assembly was limited. The requirement that unions review prime sponsor plans assured compliance with the Davis-Bacon Act and ensured that union jobs would not be undercut by YEDPA subsidies to youths. Some agreements were negotiated for union involvement in work-training demonstration projects. Although private employers were not actively involved in program planning, they did participate in some work experience projects, notably the entitlement program and the Public Versus Private Sector Jobs Demonstration. The effect of union and private business participation in program operations is discussed in Task 3.

In general, a tradeoff was made at the planning and assembly stage (which continued throughout operation of the programs): a tradeoff between smoothness of implementation and changing the direction of services and opportunities. What was done most often was to expand the existing set of opportunities by involving the major participants in the community service network. This strategy avoided the pitfalls of bypassing existing organizations and creating resistance that could stall implementation, but at the cost of reform or change in the type of opportunities available.

Case study reports of the implementation of formula-funded programs (YETP, YCCIP, and SYEP) (National Council on Employment Policy, 1980a, 1980b, 1980c, 1980d) and of the entitlement program provide more detail on the effects of these conditions on YEDPA planning and program assembly in terms of the planning of program services, the selection of program operators, the assessment of participant needs, the hiring and training of staff, the creation of reporting and information systems, and, not least of all, the ability or willingness of the prime sponsors to cooperate with any additional research requirements of the knowledge development plan.

Task 2: Targeting, Recruiting, and Enrolling Participants

The target group for YEDPA programs was defined broadly as economically disadvantaged youths. For each part of YEDPA, the definition was more specific in terms of age, employment and school status, and the Bureau of Labor Statistics' living standard (see Table 3.1). In some parts, the entitlement program (YIEPP), for example, eligibility criteria were stricter than in other parts or titles. Within the legislated target-group definitions, local prime sponsors were asked to identify "significant segments" of particularly disadvantaged youths for more emphasis.

Two factors constrained the targeting and recruiting of youths for YEDPA programs. First, because of the short planning period for YEDPA, many prime sponsors based their target-group designations (i.e., size and characteristics of population) on information that was out of date. In addition, to ensure adequate funding in the event of a great demand for the program, some prime sponsors tended to overestimate enrollments. The result was that actual enrollments were often less than planned enrollments.

Second, because of YEDPA's maintenance-of-effort requirement (that regular services to youths in other titles not be curtailed because of the availability of YEDPA funds), many prime sponsors reported difficulty in recruiting the required numbers of youths for some YEDPA demonstration projects (e.g., the Career Intern Program, the Mixed Income Experiment, the Bureau of Apprenticeship Training Project, Opportunities to Learn and Earn, and Job Factory). This problem was sometimes most pronounced in programs targeted to the most disadvantaged. These factors, together with a perceived discrepancy between the demands of the labor market and the characteristics of the youths served, gave rise to a tradeoff between serving those most in need in a target group (i.e., the most disadvantaged of in-school or out-of-school youths) and serving those whom it was thought could get the greatest benefit from the program (usually the least disadvantaged).

The involvement of private employers in youth programs was an additional impetus for many program operators to select the relatively less disadvantaged because they were thought to be more capable and attractive to employers. This practice of "creaming" raises questions of equity and efficiency if one assumes that many of these relatively less disadvantaged youths would have obtained jobs without the aid of the programs.

The Role of Schools

The recruitment of in-school youths, particularly when recruiting or program operations involved the cooperation of the school system, was especially subject to creaming. Some school officials reportedly viewed program participation as a reward for the most promising among low-income youths. The identification of a particularly important in-school group--those "at risk" of dropping out of school--for instance, was subject to wide interpretation. Case studies indicate that although a few schools turned to school records as a means of identifying potential dropouts, many schools identified such youths through less objective means. Depending on how youths "at risk" were identified, the target groups served in different areas may have been quite different from each other.

The recruitment of school dropouts, as distinct from those at risk of dropping out, presented even more of a problem for local program operators. Most schools, because they were not actively involved with dropouts, found it difficult to recruit them, and, if they recruited them, found it difficult to adjust their programs to accommodate them. The entitlement program, for example, which was designed to serve dropouts willing to return to school as well as in-school youths, ended up serving primarily in-school youths thought to be at risk of dropping out. The difficulty the entitlement program encountered in keeping returned dropouts in school, even with a job guarantee, suggests the great difficulty of providing educational services for this group. It is not clear from the available reports whether schools resisted targeting and service to dropouts simply because they saw their mission and constituency as different from CETA's or because the requirements of recruiting and serving such youths were too burdensome.

The patterns of participation of in-school compared with out-of-school youths were also a function of the type of program offered. YETP, although targeted to both in-school and out-of-school youths, enrolled primarily in-school youths, and as suggested above, not necessarily the most disadvantaged youths. On the other hand, YCCIP which was targeted to out-of-school, unemployed youths, enrolled primarily high school dropouts who were more economically disadvantaged than YETP participants. The image of YCCIP as an unadorned work experience program of low-skill level may account for this. It is also interesting that despite the traditionally male jobs developed in YCCIP (e.g., weatherization, maintenance, rehabilitation, and landscaping), 25 percent of the participants were female.

The Role of Other Agencies

The high participation rates of in-school youths in YEDPA programs in part reflects the chronic problem of recruiting out-of-school youths, particularly dropouts. Many prime sponsors have relied on employment security offices and certain CBOs to recruit dropouts for youth programs. Even these agencies, however, have had difficulties in recruiting dropouts; and even when they have been successful in recruitment, they have had difficulties in actually enrolling and then serving dropouts. Many CBOs, by tradition, have provided specialized services (e.g., skills training, career exploration, and basic education) for certain target groups (e.g., women, refugees, and ethnic minorities) and were used in reaching those target populations. Like the schools, however, the goals of the CBOs at times diverged from those of the YEDPA programs, causing similar implementation problems. The CBO-run Career Intern Program, for instance, found few dropouts willing to participate in their alternative education program; many youths indicating their preference for a faster Graduate Equivalency Diploma (GED) program.

The involvement of other federal agencies in youth employment, as mandated by YEDPA, did not occur at the local level to the same degree that collaboration with schools and CBOs did. With the exception of demonstration projects funded under interagency agreements, about which little is known due to lack of evaluations of program impact, there were only scattered examples of efforts to involve other units of local government (e.g., welfare and juvenile service agencies) in youth programs.

The role of another part of the Department of Labor, the Employment Service, for instance, was limited. With the exception of Project STEADY, which was designed and operated by the Employment Service to provide assessment services to youths, the local offices did little more than refer job seekers to CETA programs and verify the eligibility of CETA applicants. The Employment Service has traditionally been viewed as a means of recruiting out-of-school youths, but its role or overall effectiveness in providing this service for YEDPA is not known.

The repeated failures of programs to reach the dropout population explains the general tendency of programs designed to serve dropouts to redirect their efforts to more easily recruited in-school youths identified as potential dropouts. Although this approach may prevent some youths from dropping out, it does not address the needs of those who already have. The emphasis on in-school youths also fits the historical trend of employment and training programs to serve this more reachable target group and to orient its programs to them.

The Economic and Racial Isolation of Youth Employment Programs

Another problem faced by prime sponsors in the recruitment of YEDPA participants was the strict income eligibility requirement and the image it created of YEDPA as a poverty program, and by association in many urban areas, a black program. One consequence, particularly in areas where school integration had created friction, was the difficulty of recruiting white youths.

The participation patterns in the entitlement program illustrate the influence of several other factors on program participation and reinforce the findings of other YEDPA programs that participation is higher among in-school than out-of-school youths and higher among blacks and Hispanics than among whites. These patterns appear to be influenced by the job and program alternatives available to those youths, the amount and type of recruitment, and the image of the programs in those communities.

The higher participation of blacks than Hispanics in part reflects the alternatives available to these two groups in their local communities. In the entitlement program areas, eligible Hispanics had higher employment rates and lower school enrollment rates than did blacks; in-school blacks, who had fewer employment opportunities, tended to enroll in the entitlement program, while out-of-school Hispanics had more alternatives for employment outside the program.

The low participation of white youths, and the difficulty of some programs in recruiting them, is a function of the coincidence of race and eligibility criteria. The fact that the entitlement program had stricter income eligibility requirements (i.e., generally required lower family income) than other YEDPA programs resulted in a large concentration of minorities in the eligible population. In addition, in those sites where the entire city was not the focus of the entitlement program, existing residential segregation combined with the requirement of residency in the entitlement area to increase the minority racial and ethnic character of the eligible pool.

Thus, even if the programs were as attractive to white as to black or Hispanic youths, the latter groups would have represented a substantial share of participants in many areas and a majority in some (e.g., Baltimore and Detroit). These situations were exacerbated by the image of these programs as black poverty programs. Attempts to test the effects on these programs of economic isolation by mixing participants of various income levels, as in the Mixed Income Demonstration, were frustrated by difficulties in recruiting sufficient numbers of nondisadvantaged youths.

In summary, several general points emerge from the evidence on targeting and recruitment. First, the criterion of economic disadvantage is increasingly difficult to implement at the increasingly disadvantaged levels. Second, many of these programs tend to recruit and enroll more in-school than out-of-school, particularly dropout, youths, partly because dropouts are outside the established education and social service network and therefore are difficult to reach, and partly because many youth program operators have historically geared their services to in-school youths and resist adjusting to other groups. Those programs that did enroll large numbers of dropouts generally experienced higher turnover of participants and underspent their funds, indicating that a workable approach to serving the dropout population had not been found. Third, it appears that targeting programs to economically disadvantaged youths tends to isolate those programs socially, racially, and economically, perhaps limiting their effectiveness.

Task 3: Staffing and Organizing Program Activities

Staffing

The quality and stability of program staff are important factors in the operation of youth programs. Numerous program evaluations cite staff characteristics as contributing to program success and program failure. Although quantitative data are not abundant, conventional wisdom and the observations of program personnel and evaluators alike suggest the important role played by the staff in programs in which personal motivation and morale are critical to participants' success. The summer program is an example of improvement in program quality when the quality of the work-site supervision is enhanced.

The staffing of youth programs has been constrained by the instability of funding and the isolation of the programs from mainstream social institutions. Staff positions in employment and training programs have characteristically been low paying and offer limited opportunity for advancement. Given such conditions, it has been difficult to recruit and retain quality staff. These characteristics, plus the limited duration of many youth projects, have created high turnover in both prime sponsor and program operator staff, which in turn create a program environment of discontinuity and impermanence. Several case studies cite staff turnover in excess of 50 percent and others note the complete turnover of top administrative staff (Taggart, 1980).

Program Activities

The formula-funded programs operated under YEDPA, YETP, and YCCIP were organized and implemented much as they had been under regular CETA youth programs. The time pressure under which programs were started and the YEDPA requirement that funds be given to programs with "demonstrated effectiveness" reinforced prime sponsors' reliance on established programs and providers, a reliance that case study reports suggest was warranted (National Council on Employment Policy, 1980b, 1980c). Other, more basic problems with these program operations, however, included the restriction of work activities imposed by the Davis-Bacon Act. This law, written to prevent the displacement of unionized workers by nonunion workers, requires that construction workers employed under federally funded projects be paid union wage rates even if they are not union members. This provision effectively limited the activities allowed in work programs, sometimes adversely affecting their quality.

Restrictions on the allowable use of employment and training funds created another limitation. YCCIP projects, for instance, were supposed to employ youths in community improvement and conservation projects, but there were no funds for supplies or equipment so programs had to obtain supplemental funds from other local sources. Placement of youths in private businesses was not to involve any work that would contribute to the profit of the firm, which made it difficult to provide youths with meaningful work. The requirement that YACC projects not contribute to tasks that the federal agency would have done at its own expense meant that those tasks were, like the tasks in private businesses, of low priority. These requirements presented challenges that were met with varying degrees of success.

Some of the demonstration projects provide examples of the effects of restrictions on program operations. In one YCCIP demonstration project, Ventures in Community Improvement (VICI), funds for supplies and equipment were obtained from local sources, with such success that five of the eight VICI sites continued operations with local support after YEDPA funds were gone. A study of the involvement of private business in the entitlement program (YIEPP) found that the higher the quality of work, the higher the displacement of nonsubsidized workers, suggesting the inconsistency between the provision that jobs not be make-work and the Davis-Bacon no-displacement requirement.

The involvement of private businesses in youth programs met with mixed success. The entitlement program (YIEPP) recruited nearly 6,000 businesses as work sponsors, representing 55 percent of all work sponsors (public and private) participating and 20 percent of youth job hours. However, even when offered a full subsidy at the minimum wage and relieved of overhead costs, only 18 percent of the employers sampled in a survey of private businesses (Ball et al., 1981) would agree to accept an entitlement program youth. At a 75 percent wage subsidy, the agree-to-participate rate dropped to 10 percent, and at a 50 percent subsidy it dropped to 5 percent. On the whole, however, the employers in the entitlement program reported satisfaction with the youths placed with them, and one in five hired that person after the subsidy ended. The Corporate Career Demonstration Project, on the other hand, which was to train youths in corporate careers through placement in entry-level positions in participating businesses, could not recruit youths of the appropriate skill level for the program. The private employers were unwilling to participate when the participants' lack of basic skills became apparent.

Task 4: Assessing Participant Needs and Matching Them to Program Services

There are two basic ways of assessing needs and prescribing services for youths: according to their membership in broadly defined groups or as particular individuals. The first method considers such characteristics as age, school status, or family status (e.g., motherhood). These categories may then be connected to broad categories of program components suited in general to members of the group--providing skills training, for example, to groups of older youths, with or without particular services, such as child care. Distinctions among these groups of people can be made on the basis of objective characteristics and appropriate assignment can be made routinely. This was perhaps the predominant method of assessing needs in YEDPA, particularly in the formula-funded programs. The second method, based on individual needs, considers such issues as educational deficiencies, career aptitudes and interests, and social, family, or legal problems. Obviously, mechanisms to assess such individual needs require more resources.

Because of planning and funding schedules in CETA, target-group needs were assessed prior to recruitment and enrollment of participants. Individual needs assessment, when available, was provided after enrollment and usually by a smaller program operator subcontracted for this service. There is little evidence that prime sponsors designed services to meet the individually assessed needs of participants, probably because initial funding decisions tended to lock in specific services prior to such assessments. It was possible, however, to use individual needs assessments to assign participants to available program and service options.

Under YEDPA the assessment of individual participant needs was generally restricted to demonstration programs, there being little provision for such services in formula-funded programs. Some of the Project STEADY sites, Project Redirection, and the Consolidated Youth Employment Demonstration Project are examples of YEDPA demonstration projects that offered such services. In these cases the individual assessments took the form of "employability development plans" and prescriptions for various programs and support services tailored to the individual. One source reports that in the Consolidated Youth Employment Project the more complete assessment practices did not affect how services were provided or who was given what services (Hahn and Lerman, 1983).

There is a general lack of evidence as to the effectiveness of individual needs assessment in terms of participant outcomes. For in-school youths, individual needs are probably most closely related to their educational situation and best handled by the schools themselves. Attempts at assessing individual career interests of in-school youths for the purpose of placement in work experience, for instance, is probably premature for this age group (Osterman, 1980b), and it is costly to operate beyond a limited scale.

For out-of-school youths, however, individual assessments of educational and employment needs appear to be more important and potentially have more payoff. With the exception of the Job Corps, however, there were no major efforts under YEDPA to provide such individual services. YCCIP, for instance, which served largely out-of-school youths, was an unadorned work program with no provision for such extra services.

Task 5: Monitoring Quality of Programs and Services

The Department of Labor continually exhorted prime sponsors to be attentive to the quality of programs, in particular as indicated by project size and number of supervisors. Case study reports of the formula-funded programs (National Council on Employment Policy, 1980b, 1980c) suggest that the overall quality of work experience under YEDPA was better than it had been in earlier youth programs. Evaluations of the entitlement program also indicated that the quality of work experiences in the opinion of evaluators, supervisors, and participants was generally good.

This general improvement in work quality during YEDPA in comparison with earlier CETA programs was due largely to a 1979 report (U.S. General Accounting Office, 1979) on the summer youth program and the extensive monitoring of programs that followed. The report cited numerous problems in the summer program, notably the poor quality of supervision, the meaningless make-work jobs to which the youths were assigned, and the failure of work site supervisors to require attendance as a condition of payment. The public outcries caused by this report prompted the creation of an extensive monitoring system involving national and regional offices, prime sponsors and program operators, and the establishment of standards for work site supervision, quality of work assignment, and time and attendance procedures.

The sustained pressure from the national office on local programs to establish and enforce standards of quality in program operations and the capacity for self-evaluation that it created were important contributions to the youth employment and training system.

YEDPA RESEARCH: THE YOUTH KNOWLEDGE DEVELOPMENT PLAN

The YEDPA research agenda, known as the youth knowledge development plan, was designed and administered by the national Office of Youth Programs and implemented through agreements with local CETA prime sponsors and contracts with various public and private research agents and "intermediaries." This effort consisted of various demonstration projects and of research and evaluation studies of them and of some formula-funded programs.

Two major factors constrained the design and conduct of YEDPA research activities: first, the competing demand, both nationally and locally, to mount four new youth programs, at roughly double the level of previous funding, within the extremely short time limits imposed by the initial 1-year congressional authorization; and then, second, the demands of the Vice President's Task Force on Youth Employment for the results of the YEDPA research. This section describes how, operating under these constraints, OYP first designed the knowledge development plan and then implemented it.

Design of the Plan

The YEDPA legislation provided the Department of Labor and its new Office of Youth Programs with a mandate to test the relative efficacy of different methods of dealing with the employment problems of young Americans. The legislative concern with learning what works for whom was consistent with the frequently stated contention that decades of federal funding for similar programs had not yielded much in the way of reliable knowledge. The YEDPA research plan was designed as a systematic exploration and assessment of alternatives for meeting the goal of knowledge development.

The 1978 Employment and Training Report of the President (U.S. Department of Labor, 1978:77) noted that despite "numerous public policy initiatives" over the decade from 1963 to 1973, youth unemployment remained at the same high levels that had led to the creation of programs for youths in the early 1960s. Among the factors cited as possible explanations was that "the rapid expansion of program initiatives hampered program planning, smooth implementation, and thorough evaluation." The commentary on the research conducted prior to YEDPA was quite specific in its catalog of shortcomings (U.S. Department of Labor, 1978:79):

> Researchers are not unanimous in their conclusions about the effectiveness of employment and training programs because many evaluations have been imperfectly designed, lacked sufficient followup data, or were unsuccessful in isolating program effects from other factors. The failure to find a suitably matched control group, whose earnings and job success could be compared with those of enrollees . . . flawed at least one major cost-benefit study.

A major review (Perry et al., 1975) of 252 evaluations of employment and training programs conducted under the Manpower Development and Training Act of 1962 and the Economic Opportunity Act of 1964 indicated that the problems associated with evaluation research were not unique to youth programs. This review found that the majority of employment evaluation studies were little more than descriptive analyses of program operations and of the characteristics of enrollees, with little postprogram follow-up data. Moreover, fewer than 1 in 10 of the evaluation reports used a control group and "in almost every case in which a control group was used there were valid reasons to question the comparability of the controls and the treatment group" (Perry et al., 1975:139). These authors concluded that although there were a large number of evaluations of government employment programs in the 1960s and early 1970s, "few [were] very useful as a reliable base of information from which to draw firm conclusions regarding [their] economic impact. . . ." (p. 138).

Familiar with these shortcomings, the designers of the first OYP knowledge development plan identified the potential snares and basic limitations of the plan's efforts (U.S. Department of Labor, 1980c:5-7):

> First, new programs take time to jell. . . . What initial studies can do is identify who is enrolled, the services they receive, the immediate outcome on termination, and the "correctable" operational problems. . . . They can indicate the practicality of some designs. . . . [But] they cannot determine long-run impacts. Second efforts to track postprogram effects on participants require considerable time. . . . Particularly for youth, the concern is with even longer-run impacts. It takes from five to ten years for the "lasting" effects to surface, as youths mature into adult workers. Third, estimation of the impacts on participants requires a comparison group to indicate what would have happened otherwise. . . . Development and tracking of a

> comparison group is technically difficult, costly, and often has not yielded reliable results. . . . Fourth, cost-benefit analyses to determine if benefits of programs expressed in monetary terms exceed the costs, are attractive in principle but difficult in practice.

This premonition of the snares awaiting such research enterprises was, as the following chapters document, fully borne out.

YEDPA's initial research plan was based on eight questions, posed by OYP in response to the structure of the YEDPA legislation and its funding formula (U.S. Department of Labor, 1980c):

- Does subsidized employment help youths complete their schooling and does increased schooling increase the employability of potential dropouts and the disadvantaged?
- Can the school-to-work transition process be improved?
- What work experiences are worthwhile and meaningful for youths?
- Does structured, disciplined work experience have a different impact on the employment prospects of youths than other types of employment services?
- Are there better ways of delivering employment and training services to youths than those now in use?
- To what extent do short-term interventions yield longer term results (e.g., on employment in adulthood)?
- What works best for whom?
- What are the costs of fully employing youths?

Though revised and expanded over time (see Elmore, in this volume) these eight questions, vague and imprecise as they are, remained as the essential issues of the YEDPA research effort. A later plan describes how specific demonstration projects were designed in response to these basic questions, but it provides no overall framework specifying research design, methodology, standards, or procedures for drawing together the rather disparate pieces of research to address the major research issues. The YEDPA research strategy was criticized from the beginning as overly complex and ambitious; over time, rather than evolving toward a clarification of major problems and solutions, it became even more complex, with changing program designs, research issues and methods, and expectations of results.

The knowledge development plan was based on a developmental management view of research and evaluation--as a tool for instituting new programs and then shaping and monitoring them as they developed. Early studies were to focus primarily on process and project implementation data. As weaknesses in program design or procedures were discovered, adaptations were to be made to improve the programs. As programs evolved, their objectives, expected outcomes, and evaluations were to be changed. This developmental approach to research and program operations, although it complicated the research agenda and tended to make interpretation of results more difficult, served an important management function for OYP as it undertook the administration of the enormous youth employment program. Unfortunately, in many projects the formative evaluation process was not completed before YEDPA was terminated.

Implementation of the Plan

One of the major problems in implementing the knowledge development plan was the sheer magnitude of the effort in relation to the size of the OYP staff. The demands of mounting expanded and new service programs for youths along with the design and implementation of a complex research program necessitated a tradeoff between careful research design and rapid project implementation to maximize economic impact. This pressure was intensified by the expectation that some results would be available in time for the CETA reauthorization proceedings in late 1978. The subsequent and equally unrealistic expectation of more detailed research results by the fall of 1979 to inform the Vice President's Task Force on Youth Employment served to maintain the time pressure throughout the course of YEDPA operations.

The feasibility of the research effort was perhaps doubtful from the outset even under the most generous assumptions of staff time and capability: however, the OYP staff was small in relation to the size of the effort and also for the most part inexperienced in research and research management. These constraints, together with the legislative charge to involve other federal agencies and community-based organizations in YEDPA programs, led OYP to delegate the management of large pieces of YEDPA activity to organizations outside the Department of Labor.

This strategy of indirect management involved five different types of negotiated agreements: with "intermediaries," other federal agencies, other parts of the Department of Labor, other organizations for staff support, and other organizations for constituency support. In addition to increasing OYP's staff capability in administering YEDPA, these arrangements were designed to expand the institutional capacity of the youth employment system for future programs. The background and functions of each of these organizational arrangements are described in detail in Elmore (in this volume) and summarized herein. Table 3.8 presents data on the program budgets and tasks administered through each arrangement.

The intermediary agreements with four private nonprofit corporations were negotiated for the design, management, and evaluation of various demonstration projects. The agreement with the Manpower Demonstration Research Corporation, a previously established firm, to manage the entitlement demonstration program, served as the model. Three other intermediaries were created to manage the private sector youth employment demonstrations, the exemplary programs to link school and work, and, through an interagency agreement with the Community Services Agency (CSA), demonstrations of youth-run enterprises.

Interagency agreements were negotiated with several federal agencies to meet congressional expectations of broader government involvement in solving youth employment problems. Projects funded through ACTION; CSA; and the Departments of Housing and Urban Development; Health, Education, and Welfare; Agriculture; Energy; and Interior were designed to meet youth employment objectives through means compatible with each agency.

Intraagency projects managed by the Office of the Assistant Secretary for Policy, Evaluation, and Research (ASPER) and by the Office of Policy Evaluation and Research (OPER) brought the expertise of established Department of Labor research units into the YEDPA effort and incorporated a YEDPA sample into the established Continuous Longitudinal Manpower Survey and a youth sample into the National Longitudinal Survey (see Chapter 9 and Appendix D).

External staff support was provided primarily through the Brandeis University Center for Employment and Income Studies (CEIS), which was responsible for the analysis, dissemination, and policy utilization of the research findings. (CEIS subsequently became part of the university's Center for Human Resources.) In responding to its first charge, CEIS criticized the knowledge development plan for its complexity and lack of coherent framework, criticisms that the results of YEDPA research suggest were warranted, but which unfortunately were unheeded. Their role in the retrieval, synthesis, and dissemination of YEDPA research was more effectively executed and became critical in the closing days of YEDPA when OYP was disbanded before the research was complete.

Another important external support function was to have been provided by the Educational Testing Service, for the design and analysis of a national YEDPA data base. The data were generated by application of the Standard Assessment System, a battery of instruments administered to participants and program operators to measure the effectiveness of YEDPA across sites and programs (see Chapter 9 and Appendix A).

Results of many of the youth projects funded through agreements with outside agencies are unknown. Only two of the four intermediaries produced reports on program effectiveness that this committee could use in its review. The vast majority of projects funded under interagency agreements were not evaluated. The intraagency projects, particularly those that supported national data bases, were among the most successful of the knowledge development activities in terms of their methodological rigor.

Overall, this management structure, although effective in quickly initiating programs and research activities on a large scale, was too decentralized to manage the direction of the programs effectively or to analyze the research activities in a coherent way. Given the level of responsibility and authority delegated to the various parties, it is not surprising that they became almost immune to centralized control of their operations. And, given the overload at the center, it is not surprising that OYP could not maintain control in response to problems arising in various parts of the structure. Toward the end of YEDPA, but prior to the completion of many projects and their research reports, the central control literally fell apart, first with the resignation of the director of OYP and later with the disbanding of OYP under the new Reagan administration. It was at that point, with many project reports outstanding, that CEIS assumed its critical role in retrieving, synthesizing, and disseminating the research.

SUMMARY

The conditions under which YEDPA was implemented, in terms of its legislative mandates, its time schedules, and the program and policy environment in which it operated, were significant in determining the course of YEDPA programs and the outcomes of its research. From its legislative beginnings, YEDPA was constrained by two competing demands: to mount four new, large-scale jobs programs and, at the same time and through the same delivery system, to design and conduct a comprehensive research and demonstration effort aimed at ameliorating the structural employment problems of youths.

The imposition of the research and demonstration activities on the already burdened service delivery system taxed the resources available for both the national management and local operation of YEDPA. The additional pressure to launch these programs and obtain research results within 1 and 2 years, respectively, of the passage of YEDPA further increased the pressures of implementation. The severe consequences of all of these conditions for YEDPA program operations and research, though not quantifiable, were readily apparent in the numerous reports reviewed by this committee in its task of assessing program effectiveness. The conditions characterizing the implementation of YEDPA from its start in 1977 through its abrupt halt in 1981 were described here to provide readers with a context for better understanding the results of our review of the effectiveness of the YEDPA programs, which we present in the chapters that follow.

4

Procedures Used in Evaluating the Effectiveness of YEDPA Programs

An explicit purpose of YEPDA was the establishment of a variety of programs to explore alternative means of dealing with youth employment problems. Implicit in the legislation was the concept that programs be evaluated to determine their relative effectiveness or "what works best for whom."

To date, the only effort to provide a systematic evaluation of the products of the YEDPA research effort is that conducted by Hahn and Lerman (1983) of Brandeis University. Their assessment yielded what are described as "representative" findings from the YEDPA evaluations, based on a review of the significant findings, where significance was defined "in terms of the reliability of the research reviewed and the importance of the policies addressed by the findings" (Hahn and Lerman, 1983:4). The results of the Brandeis evaluation focused attention on the studies undertaken under YEDPA and led, at least indirectly, to this committee's creation.

SOURCES OF DATA AND CRITERIA USED IN SELECTING REPORTS

The major source of information that the committee used for assessing the effectiveness of the YEDPA programs was the research and evaluation reports commissioned by the Office of Youth Programs (OYP) as part of its discretionary knowledge development effort. A collection of over 400 reports, compiled by the Employment and Training Administration (ETA), had been forwarded to us for review. We also searched the available literature beyond the reports generated as part of the YEDPA process (see, for example, the discussion of national data bases in Chapter 9) and consulted people who had experience with youth programs and related research. Even so, with the exception of studies of two regular CETA programs (the Job Corps and the Summer Youth Employment Program) and Supported Work, programs that predated YEDPA, we relied almost exclusively on the reports of particular youth demonstration projects carried out under YEDPA to assess the effectiveness of youth programs.

We first screened the documents obtained for review to identify reports meeting two criteria: (1) that the report be on a youth employment program that had actually been implemented and was in operation during the YEDPA period (roughly 1977 to 1981) and (2) that the report contain quantitative data on the effectiveness of that program, be it at any stage from implementation to program completion or follow-up. As a result of this screening, we eliminated about 170 reports from further consideration. These were reports on subjects not specifically related to any implemented programs, for example, technical assistance guides, conference proceedings, and program plans and descriptions of a general nature. Some of these reports met the first condition, that is they reported on youth programs actually implemented, but were not evaluations of program effectiveness. Some others purported to be effectiveness evaluations, but were so lacking in data on program outcomes that they could not be evaluated by the committee.

About 200 reports on youth projects met the initial screening criteria. For each project the reports variously described program implementation, in-program effects, and outcome evaluations. These project reports were then classified according to program type and the target group(s) served (the classification framework is described later in this chapter). The most comprehensive report on each project was then subjected to a second screening to identify reports of sufficient scientific merit to be reviewed in more depth by the committee as the basis for judging the effectiveness of YEDPA programs.

Reports were screened using the following criteria:

1. that there be preprogram and postprogram measurement of major program objectives;
2. that comparable comparison group data be presented; and
3. that initial sample sizes and response rates for participant and control groups be of sufficient size, preprogram and postprogram, to allow usual standards of statistical significance to be applied to measured program effects, and to alleviate concern for attrition bias.

Subcommittees defined by the four major program types reviewed in depth the project reports that met the three criteria and assessed their effectiveness. Reports of interest for the information they provided on program implementation, whether or not they met the effectiveness criteria, were included in the implementation review reported in Chapter 2. A list of all reports considered by the committee for the effectiveness and implementation reviews appears in Appendix B.

COMPARISON OF PROJECTS REVIEWED AND PROJECTS EXCLUDED FROM REVIEW

The projects included in the effectiveness review were selected on the basis of the scientific merit of their research reports. The projects that form the basis of this review, therefore, may not necessarily be representative of all of the various youth employment projects operated under YEDPA, either discretionary or formula funded.

Table 4.1 shows the major YEDPA discretionary demonstration projects by subpart and funding level and the disposition of reports on

TABLE 4.1 Disposition of Reports on Major Discretionary Projects, by YEDPA Subpart and Funding Level, Fiscal 1978 and 1979

YEDPA Subpart[a]	Project Disposition: Total — Number of Projects (1)	Total — Funding (millions)	No Report Available — Number of Projects (2)	No Report Available — Funding (millions)	Excluded at Initial Screening — Number of Projects (3)	Excluded at Initial Screening — Funding (millions)	Excluded After Review — Number of Projects (4)	Excluded After Review — Funding (millions)	Included — Number of Projects (5)	Included — Funding (millions)
YIEPP	1	$240.2							1	$240.2
YETP	44	100.6	9	$ 7.4	7	$32.9	16	$33.5	12	26.8
YCCIP	9	46.1	6	32.6	1	1.2	1	1.5	1	10.8
SYEP (enrichment)	7	10.4	2	1.3			3	1.9	2	7.2
Total	61	$397.3	17	$41.3	8	$34.1	20	$36.9	16	$285.0
Subtotal of above funded under interagency agreements	14	$ 48.8	1 (Action)[b] 3 (CSA)[b] 3 (HEW)[b] 2 (HUD)[b]	$ 1.3 7.0 3.5 21.7			2 (Action)[b] 2 (HEW)[b] 1 (Energy)[b]	$ 9.3 5.6 0.4		

NOTE: Included as major projects are those funded at a minimum of $200,000. Excluded from this table are nine $100,000 projects, six for which reports were not available, two excluded at initial screening, and one excluded after review.

[a] Subpart titles are Youth Incentive Entitlement Pilot Projects (YIEPP), Youth Employment and Training Program (YETP), Youth Community Conservation and Improvement Project (YCCIP), and Summer Youth Employment Program (SYEP).

[b] Interagency agreements were signed with Action, Community Aervices Administration (CSA), the Department of Health, Education, and Welfare (HEW), the Department of Housing and Urban Development (HUD), and the Department of Energy.

SOURCE: U.S. Department of Labor (1980).

their effectiveness in our review process. The 61 projects shown (column 1) are those funded in fiscal 1978 and 1979 at amounts of $200,000 or above, and they include all of the major demonstration projects operated under YEDPA through fiscal 1981. Of these 61 projects, 17 (column 2) could not be reviewed for their effectiveness because reports on their program impacts either were not commissioned or not produced. Nine of the 17 projects were operated under interagency agreement and accounted for $34.5 million in funding. Two community conservation projects (operated by the Department of Housing and Urban Development) alone accounted for $21.7 million in funding.

The committee screened reports on all 44 projects for which reports were available (columns 3, 4, and 5). Of these projects, eight were excluded at the initial screening stage due to lack of effectiveness data (column 3). Two of these projects alone accounted for $30 million in funding; both were managed by intermediary organizations created to administer, operate, and evaluate these demonstrations.

Of the remaining 36 projects (columns 4 and 5) 20 upon further review did not meet established criteria for comparison groups (preprogram to postprogram), sample coverage, and attrition, and they were excluded from further consideration (column 4). Five of these projects, accounting for $15 million in funding, were operated under interagency agreements, including the Youth Community Services Demonstration and the Career Intern Program. Also excluded was the Vocational Exploration Demonstration, a major project funded at $8.7 million.

In addition to the projects shown in Table 4.1, we reviewed and excluded five other demonstration projects not included in the 1978-1979 funding. None of these represented a major budget amount.

Our review indicated that reports on 16 projects (column 5) met the established criteria, and they were therefore included in our review of YEDPA program effectiveness. These 16 projects represent about 63 percent of YEDPA discretionary funding, including the entitlement program (YIEPP). The projects include YIEPP ($240.2 million), Ventures in Community Improvement ($10.8 million), the Youth Career Development Project for School-to-Work Transition ($9.6 million), three Summer Career Exploration Projects ($6.8 million), the Public Versus Private Sector Jobs Demonstration ($7.6 million), and the Service Mix Alternatives Demonstration ($5.3 million).

In addition to the discretionary projects listed in this table, we also included in our review the two largest regular CETA youth programs, the Job Corps and the Summer Youth Employment Program, as well as the youth portion of the Supported Work demonstration project. Also included but not shown in this table were nine other discretionary projects not included in the 1978-1979 fundings. These additional projects bring the total number of projects included in our review to 28, representing every subpart of YEDPA (with the exception of the Young Adult Conservation Corps), including the Job Corps and the summer youth program.

OVERALL FRAMEWORK FOR EVALUATION

Our framework for evaluating the effectiveness of YEDPA programs draws together three major dimensions: program goals, program types, and target groups. We organized our review primarily according to program type, noting, in addition, the target groups served and assessing the degree to which the programs affected each of the given program goals (when measurements bearing on each were provided). Therefore, the discussion of program effectiveness appearing in Chapters 5 through 8 is presented largely in terms of program types. In the sections that follow we discuss each of these dimensions briefly.

Program Goals

The YEDPA legislation states a variety of goals for youth programs (see Elmore in this volume). Goals or outcomes can be divided into intermediate goals and long-run or ultimate goals. The long-run goals of different employment and training programs are generally similar; most, if not all, programs intend to effect longer-term improvement in participants' employment stability, earnings, family stability, and so forth. Intermediate program goals, such as increased educational attainment, work experience, knowledge of and attitudes about the workplace, and short-run increases in employment and earnings, vary across programs.

Long-run program goals are of ultimate interest from both social and policy perspectives. Intermediate goals, while not usually ends in themselves, may serve as indicators of long-run outcomes to the extent that they are expected to affect longer-term goals. Ultimately, whether intermediate goals are reliable indicators of longer-range outcomes is an empirical question.[1]

Program Types

Under YEDPA an attempt was made to ensure that a wide array of program types were tested, covering in one fashion or another most of the concepts about appropriate program types that would emerge from a systematic analysis of goals (U.S. Department of Labor, 1980b). However, even the documents describing the knowledge development effort do not provide a categorization of program types that lends itself readily to a classification scheme useful for evaluating the effectiveness of YEDPA programs. Others who have reviewed youth programs have used

---

[1] This formulation of program goals relies heavily on Barth (1972). As will be discussed in detail in subsequent chapters, YEDPA discretionary projects devoted substantial resources to the collection of data on measures of intermediate goals, much of it (such as attitude measures) subjective in nature.

TABLE 4.2 Youth Program Classifications

PIQ Service Categories[a]	Service Category Classifications: Hahn and Lerman	Service Category Classifications: Committee on Youth Employment Programs
Testing, assessment and employability plan development	Labor market preparation (career development)	Labor market preparation
Counseling (personal and career)	Labor market preparation (career development)	Labor market preparation
Other preemployment: World-of-Work Basic Skills Job Search	Labor market preparation (career development)	Labor market preparation
Vocational exploration, job rotation	Labor market preparation (career development)	Labor market preparation
Remedial education, GED, ESL	[b]	Labor market preparation
Classroom vocational skills training	Intensive skills training (out-of-school, e.g., Job Corps)	Occupational skills training
On-the-job training	Intensive skills training (out-of-school)	Occupational skills training
Work experience	Work experience: in-school and out-of-school	Temporary jobs programs
	Summer Youth Employment Program	Temporary jobs program
Support services (transportation, child care)	[b]	[b]
Placement and job development	Labor market preparation	Job placement program

NOTE: This chart compares the program classifications used by Hahn and Lerman (1983) and the committee. The first column presents the 10 service activities from the Process Information Questionnaires (PIQ) of the Standard Assessment System (SAS), and the columns to the right indicate how Hahn and Lerman and CYEP classify each PIQ service category for assessment purposes. The CBO (1982) in its analysis of youth programs classified program activities as demand side (i.e., to increase employment demand for the target group), supply side (i.e., to increase employability of youths through training, education, and employment experience), or transition (i.e., improving exchange of labor through job search and placement).

[a] Other authors have used classifications based on amounts of time in various PIQ categories for analysis of youth programs (Cole et al., 1982; Fuller and Nelson, 1982; Rock et al., 1982).

[b] Not classified.

different classifications from those used in the knowledge development documents (e.g., Hahn and Lerman, 1983; Rock et al., 1982; and Congressional Budget Office, 1982; see Table 4.2).

None of the classifications of program types developed and utilized by others seemed appropriate for our task. These classifications were often based on combinations of specific program activities and services (e.g., work experience, on-the-job training, classroom training, skills training, counseling, and participant assessment), on the one hand, and client group characteristics, on the other. On examination, we found that most YEDPA programs provided combinations of services to a mix of client groups. Thus, reviews based on classifications with fine breakdowns of service type and client group were forced to discuss a given program repeatedly under different classifications of services (e.g., Hahn and Lerman, 1983).

In designing the classifications of programs for this review we sought to minimize complexity without obscuring essential differences between programs. To this end, we chose four broad program types defined on the basis of intermediate goals. Each program evaluation report was placed in only one type, according to its intermediate goal:

1. Occupational skills training: to equip youths with specific occupational skills and knowledge as a prerequisite either to further training or job placement in that occupational field. (Examples include both on-the-job and classroom training in such fields as welding, drafting, carpentry, health, and computer occupations.)
2. Labor market preparation: to improve attitudes, knowledge, and basic skills as preparation for entering employment. This category encompasses such programs as career exploration and world-of-work orientation and programs designed to enhance youths' general educational level and skills, thereby improving their future career possibilities. (Examples of the latter are basic--remedial--education and GED programs.)
3. Temporary jobs: to provide youths with employment and general work experience in temporary subsidized jobs, either full time or part time. (Examples of such programs include work experience programs and the Summer Youth Employment Program.)
4. Job placement: to place youths in unsubsidized jobs. Services provided may include job search assistance, placement, and follow-up activities.

Target Groups

At the outset, our evaluative framework cross-classified programs by the four broad program types just described and by the target groups served, as classified by school status and age. School status distinguished in-school youths from out-of-school youths, the latter being further subdivided into those who had graduated from high school and those who had dropped out. The age groups, defined to correspond roughly with grade level, were 14-15, 16-18, and 19-21. The racial, ethnic, and sex composition of program participants were also indicated. It was our hope that this specification of target groups, cross-classified with program types, would allow us to address the question of what works best for whom.

In practice, while we did take note of the details of participant target groups, we found it was not possible to carry out separate analysis according to all of these target group categories. This was primarily due to the fact that most of the programs contained mixes of participants from the different categories and few of the evaluation reports on which our assessments were based provided separate outcome analyses for different categories of participants conforming to our detailed classification. As a result, while our reviews of program effectiveness provide as detailed information as the source material allows, our summary conclusions distinguish only between in-school and out-of-school youths, cross-classified by program type.

LIMITATIONS OF THIS REVIEW

Our ability to draw firm conclusions about the effectiveness of youth employment and training programs was constrained by two conditions that affected the implementation of YEDPA and particularly the conduct of research. First, YEDPA programs and research were mounted in considerable haste in a period in which many other employment and training and research efforts were ongoing, so that both program and research resources were stretched very thin. Second, in 1981, less than 3 years after their quick start-up and troubled implementation, many programs and evaluation efforts were abruptly halted with the change of administration.

As a consequence of these factors, most of the data on which evaluations were based, with a few exceptions, were gathered at a stage at which programs had not yet become stabilized. As a further consequence, relatively few program evaluations provide data for long postprogram periods; virtually all of the YEDPA project evaluations had postprogram follow-ups of only 3 to 8 months. Only two evaluations had as much as a 3-year follow-up, and both of those were of pre-YEDPA programs (the Job Corps and Supported Work).

Further limiting our ability to draw firm conclusions were the serious problems many YEDPA researchers apparently had in creating reasonable comparison groups and preventing sample attrition over waves of the data collection. These problems sharply reduced the number of studies that could be reviewed and put in question the reliability of the results of several others.

A final limitation of this review concerns the very magnitude of YEDPA and CETA programs from 1977 through 1981. It has been estimated that in 1978 as much as one-half of all jobs held by black teenagers during the summer were in the summer program and as much as two-fifths of jobs held in 1979 were in government employment and training programs (Crane and Ellwood, 1984; Elmore, in this volume). Thus, even when comparison groups were reasonably created, there may well have been substantial amounts of employment and training among the comparison group members. To the degree this program participation is undetected in the evaluation data, the participant-comparison contrasts will underestimate the impact of these programs.

We have attempted to test the individual YEDPA research reports against reasonable standards of scientific quality with respect to both the data collected and the methods used to measure program effects. The reports that met such standards were not necessarily evenly distributed over the range of operational youth programs or target groups being served. Thus, there are issues with respect to the role and effectiveness of youth employment and training programs that we could not address due to a dearth of reliable evidence. In addition, the quality of the available evidence varies, sometimes supporting strong conclusions, sometimes merely suggesting the direction of program effects.

Our assessments of the effectiveness of youth programs derive from examining published evaluation reports on these efforts rather than our own evaluation of the programs themselves. Since it is possible that poorly executed or poorly presented research reflects unfairly on the programs being examined, it is important that we clearly distinguish between the quality of the research and the (possibly unobserved) quality of the programs.

While we have attempted to avoid drawing inferences about program effectiveness on the basis of research quality, and are fairly confident that we have been successful in doing so, we caution the reader to bear in mind that to make a determination of either effectiveness or ineffectiveness requires credible evidence. Lack of evidence on effectiveness is not synonymous with lack of effectiveness.

In our evaluation of the effectiveness of youth employment and training programs, issues related to the adequacy of the evidence often overshadowed those related to the policy or practical significance of the magnitudes of reported effects. The question of the reliability of estimated effects is logically prior to a consideration of their policy importance. Consequently, when results fail the test of reliability (in an evaluative or statistical sense), further discussion of their implications for policy is rendered moot. Because many of the reports we reviewed did not provide reliable estimates of program effects, we often could not address the issue of the policy significance of the findings.

5

Effectiveness of Occupational Skills Training Programs

Skills training programs are generally designed to impart skills relevant to obtaining work in specific occupations. We found that few youth programs exclusively devoted to skills training were undertaken with YEDPA discretionary funds. Moreover, there is a paucity of YEDPA evaluation reports on such programs relative to the number of reports on other types of program. We are left, in effect, with only two programs--the Job Corps (which was developed prior to YEDPA) and New Youth Initiatives in Apprenticeship--that had substantial skills training components and were sufficiently well evaluated and documented to be subjects for our review. Yet each of these programs had special features that limit its applicability to broad segments of the youth population: the Job Corps is a residential program for out-of-school youths that includes much more than skills training; and the apprenticeship program required a close relationship between employers and school programs dealing with specialized skills. Table 5.1 presents the characteristics of these two programs; Table 5.2 summarizes the research design and results of their evaluations.

That few skills training programs were developed under YEDPA--which is consistent with a frequently voiced criticism of all CETA programs operating during the 1970s--apparently grew out of several concerns of program administrators. One concern was the belief that below a certain age young people tend to lack the seriousness to make good use of skills training because they have not committed themselves to a particular occupational direction. Another concern is that participants require a sufficiently high level of academic preparation to be able to participate effectively in any but the most general training, and many program applicants lack this level of preparation. In fact, as was noted in Chapter 4 and is discussed in Chapters 7 and 8, some program efforts initially designed to provide skills training were redesigned when it became clear that participants were primarily in need of more basic educational skills training.

TABLE 5.1 Occupational Skills Training Programs: Program Characteristics

Youth Program/ Evaluator	Program Approach	Services Offered	Target Group Characteristics	Length of Program Participation	Sites
Job Corps/ Mathematica Policy Research 1982	Residential occupational skills training	Comprehensive: health care; basic (remedial) education/GED; occupational skills training; and job placement	Out-of-school severely disadvantaged 14- to 21-year-old youths • 20% functionally illiterate at entrance • 70% male • 21% female without children • 9% female with children • 80-90% dropouts • 75% minority - 59% black - 11% Hispanic - 5% American Indian	x = 30 weeks	61 centers in United States and territories (the sample represents a cross-section of corps members in continental U.S. centers)
New Youth Initiatives in Apprenticeship/CSR, Inc.	Student apprentice positions in nonconstruction trades, designed to place participants in registered apprenticeships after graduation	Part-time work while in school in private sector skilled trade positions; placement in apprenticeship positions	In-school youths • 18% minority • 93% male • 96% high school graduates • B- average grade	80 weeks	7

BEST COPY AVAILABLE

TABLE 5.2 Occupational Skills Training: Research Design and Results

	Sample Size					
Youth Program	Participant	Control	Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
Job Corps	2,800 (at 4-year follow-up)	1,100	Matched comparison group, eligible nonparticipants from similar geographic areas where Job Corps enrollment was low	Increased postprogram employment and earnings of +3 weeks/ year +$567/year, or +28% Increased educational attainment (GED) probability of .24 versus .05 Cost-benefit ratio of $2,300 per enrollee[a] Reduced crime (number of arrests) during program participation Reduced seriousness of crime postprogram Increased military placement	First follow-up P = 84% C = 87% Second follow-up P = 70% C = 85% Third follow-up P = 65% C = 75%	Positive effects persist to 4-year follow-up
New Youth Initiatives in Apprenticeship	600	500	Matched comparison group from same high schools	No difference in annual earnings or wage rates	6 months to 1-1/2 years after graduation	At time of interview 40% of sample were only 6 months out of high school and only 14% were 1-1/2 years out; Timing may not have allowed advantages of program to emerge

[a] In 1977 dollars.

BEST COPY AVAILABLE

PROGRAM FOR OUT-OF-SCHOOL YOUTHS

Job Corps

The Job Corps is in many respects unique. It is distinguished by the population it serves, the comprehensive nature of the services it offers, its stability as a program, and the quality of the evaluation that is available on it. We note that these last two points are probably not unrelated.

The Job Corps is a largely residential program for out-of-school, economically disadvantaged youths between 14 and 21 years old. It provides a range of services including remedial (basic) education, vocational skills training, and health care to enrollees for about 30 weeks (the average stay during the subject evaluation).

The Job Corps serves a severely disadvantaged population: about 90 percent of Job Corps enrollees were either from households below the poverty line or receiving welfare benefits; more than 75 percent were minorities, and 30 percent were female. Moreover, despite the fact that the median age of Job Corps enrollees was about 18, median reading levels were at or below the sixth-grade level.

The Job Corps has existed for 20 years; few programs have had such stability. The program served about 102,000 youths in fiscal 1985 in 41,000 slots; enrollees averaged just under 5 months participation. At the time of the evaluation we reviewed, about 70,000 participants were being served per year.

Although the Job Corps has been substantially modified since it was first established in 1964, most evaluations of the program prior to the 1982 study we reviewed were based on the experience of those who participated in the Job Corps during the mid-1960s. A series of surveys by Louis Harris and Associates served as the primary data source for researchers attempting to estimate the impact of Job Corps. These early studies had conflicting findings. For example, one study (Cain, 1968) found that participants earned $188 to $260 per year more than "no-shows" (those who enrolled but never participated) 6 months post-program. Another study (Woltman and Walton, 1968) found no significant difference between the earnings of Job Corps enrollees and early terminees (those who remained in the program less than 3 months) 18 months after participation. Taken together, these early findings suggested that Job Corps had a short-term impact that decayed (faded) fairly quickly (Goldstein, 1973).

Our assessment of the Job Corps is based on an evaluation conducted by Mathematica Policy Research, Inc. (Mallar et al., 1982). This evaluation was the most extensive and sophisticated of the studies of the Job Corps undertaken over the years. And, unlike most evaluations of other youth employment programs that we reviewed, this study:

- was based on a large sample of program participants (2,800) and nonparticipants (1,000) who were similar in most respects to Job Corps participants. The nonparticipants were youths eligible for Job Corps who were residing in geographic areas where Job Corps enrollment was low.

- gathered data on the participant and comparison groups for a reasonably long time after the program so that it was possible to establish the degree to which postprogram effects exist and persist or decay. The third follow-up interview was conducted 42-54 months after the program period.
- had low rates of attrition in the follow-up samples of participant and comparison group members. The third follow-up survey was completed by 70 percent of those who completed the original baseline questionnaire (65 percent of participants and 75 percent of comparison group members).
- took measurements on a wide variety of factors that could be affected by, or affect, the Job Corps experience, including educational attainment, the value of economic production by Job Corps participants, receipt of welfare and other transfers, the extent of criminal activity, unemployment rates, employment rates, hours worked, and wage rates.
- used a comparison group methodology in a way that was as careful and technically sound as the state of the art permitted.

The essential finding of the Mathematica evaluation is that the Job Corps "works." In particular:

- On average, participants in the Job Corps were employed about 3 weeks per year (13 percent) more than nonparticipants up to 3-1/2 years postprogram, and their earnings gains after leaving the Job Corps were estimated to be $567 per year higher in 1977 dollars (28 percent) for enrollees than they would have been in the absence of the Job Corps experience. The amount of time that Job Corps enrollees received cash welfare or unemployment compensation benefits was lower by 2 weeks per year and 1 week per year, respectively, compared with nonparticipants. Table 5.3 presents evaluation results up to 4 years after Job Corps participation.
- Participants' educational attainment increased substantially while they were in the Job Corps: the probability that enrollees would receive a high school diploma or its equivalent (General Equivalency Diploma) within the first six months after leaving the Job Corps was .24 for enrollees compared with .05 for comparison group members.
- Overall, the health of Job Corps participants was better than that of nonparticipants after the program; participants reported about 1 week less per year of serious health problems.
- Criminal activity, as indicated by rates of arrest, was significantly lower for participants during the period of the program, and after leaving the program participants had fewer arrests for serious crimes than nonparticipants.
- After an initial 6-month postprogram period, when enrollees fared worse than the comparison group in terms of employment and earnings, the aggregate positive effects of Job Corps emerged and persisted at a relatively stable rate throughout the 4-year follow-up period. This outcome suggests that the main effects of Job Corps do not stem from job placement.

TABLE 5.3 Estimated Job Corps Effects on Employment and Earnings, Including Military Sector: First Through Fourth Postprogram Years

Months After Termination	Employed (fraction of time)	Weeks Worked per Six Months	Hours Worked per Week	Weekly Earnings (1977 dollars)
0-6	-0.018	-0.47	0.79	-0.21
6-12	0.070*	1.82*	3.19*	10.27*
12-18	0.113*	2.94*	5.19*	15.64*
18-24	0.081*	2.11*	3.76*	9.42*
24-30	0.081*	2.11*	3.44*	10.20*
30-36	0.075*	1.95*	3.35*	11.59*
36-42	0.068*	1.77*	3.20*	10.12*
42-48	0.040	1.04	1.62	5.47

*Statistically significant at the .05 level or below in a two-tailed test.

SOURCE: Data from Mallar et al. (1982:Tables IV.10 and IV.11).

These overall effectiveness estimates included all participants, early leavers as well as those who followed the Job Corps course to completion. The study also provides estimates of differences in effects according to categories of program completion. Program completers composed 40 percent of the sample, while partial completers and early dropouts each accounted for 30 percent. Program completers benefited most. Partial program completers, those who stayed at least 90 days and completed at least one specific segment of a vocational or educational program but not an entire program, benefited about one-third as much as completers. Early dropouts were found to benefit little or not at all. The authors note, however, that econometric methods for controlling for bias in selection into the three completion categories would not prove effective.

Program effects were estimated separately for males (representing 70 percent of corps members and 70 percent of the follow-up sample), females without children (21 percent of the follow-up sample), and females with children present (9 percent of the follow-up sample).

The estimated effects on employment and earnings are similar in magnitude for males and females without children, though somewhat more erratic over the postprogram period for females. For females with children present, the employment and earnings effects are both lower and more erratic than for the other two groups. The authors hypothesize that the lower effect for women with children may be due to the higher proportion of very young children among the participants than among the comparisons. This difference is apparently due to delays in childbearing by participants during the in-program period, followed by a higher rate of postprogram births than among comparison group members. The result is the presence of a greater number of young children among participants in the postprogram period.

Effects of the program on crime are estimated from self-reported arrest data gathered in interviews with participants and comparison group members. The major effects are estimated to occur during the period in which participants are in the program, when total arrests and incarcerations were significantly lower for Job Corps members than for the comparison group. In the postprogram period, the estimates show an overall reduction in arrests (statistically significant for males), a reduction in theft arrests, an increase in auto-related arrests, and no effect on time in jail.

When the benefits and costs of the program were estimated--in a quite detailed and sophisticated benefit-cost analysis--the study found that from the view of society as a whole, the net present value of benefits exceeded costs by $2,300 per enrollee (in 1977 dollars). From the view of the participants, benefits exceeded costs by $2,400 on average. For nonparticipants (i.e., private benefits and costs), a net cost of $115 per enrollee was incurred, representing a net redistribution of resources from nonparticipants to Job Corps participants.

The estimated magnitude of the benefit-cost difference is particularly sensitive to the assumptions regarding the magnitude of the effect of the program in reducing crime. The evaluation assumes that actual arrests were underreported by 70 percent among members of the Job Corps sample; this assumption is based on a study done for the evaluation of the Supported Work program.

Considerable attention has been devoted to the issue of the correlation between self-reports and official reports of criminality and arrests in the criminal justice field. There is no generally accepted differential between self-reported and official data on criminality that supports the use of any given numerical factor to increase the self-reported incidence of arrests.[1] However, even when it is assumed that no postprogram crime-reduction benefits are associated with Job Corps, the net present value of the program to society is still positive, about $500 per enrollee.

The Job Corps evaluation was extensively reviewed by outside experts in 1982 at the request of the Office of Management and Budget. The reviewers did not find any major problems, though one had some doubts about the adequacy of the selection bias corrections. We have some remaining reservations about the Job Corps evaluation that are largely technical in nature.

Random assignment to the Job Corps and to a control group was ruled out by the Department of Labor at the outset. Given that constraint, the comparison group strategy seems to have been well conceived and, for the most part, well executed. Comparison group members were drawn from geographical areas that were similar to the home areas of Job Corps members but that had low rates of previous enrollment in the Job Corps. Within these areas, sample members were drawn with selection probabilities in proportion to their similarity to Job Corps participants in terms of age, poverty status, race, and education.

---

[1] A recent summary of research on the use of self-reported measures of delinquency indicates widely varying estimates of underreporting depending on method of administration (questionnaire or interview) and sample characteristics (sex, race, socioeconomic background, school status, and previous contact with police). Underreporting appears most serious among black males with previous delinquent offenses (Hindelang et al., 1981).

Beyond controlling for measured characteristics when estimating effects, the evaluation attempted to control for selection bias by modeling the selection process using the methods suggested by Heckman (1979). While the selection bias correction appears to have worked well, more detailed information than that available in the report is required to remove some residual doubts as to whether this correction dealt completely with self-selection problems. The efforts at correction go considerably beyond those usually applied when dealing with comparison groups (rather than randomly assigned controls groups), but the nature of the comparison group renders the evidence of program effects less convincing than it would be had a randomly assigned control group methodology been used.

The Job Corps provides a comprehensive set of services and whether the comprehensiveness is central to the effectiveness of the program has not been directly evaluated. Apparently, earlier reports did provide some estimates of the difference in impact according to the members' exposure to particular components, but those results were not reported in the Mathematica study and mention is made of selection bias problems in making assessments. Since participants are not randomly assigned to the various components, self-selection factors seem likely to be confounded with the actual effects of the component in which a participant is enrolled. We do not have sufficiently detailed evidence that allows us to isolate the elements of the Job Corps program and determine whether (or for whom) the residential element of the program is critical; whether the health component is essential; or whether the skills training offered adds to any effects that the basic education elements may have created--or vice versa.

Since women represent about 30 percent of Job Corps enrollees, the desire to obtain reliable estimates by sex led to the selection of a comparison group that was 50 percent female. Unfortunately, it appears that the enrollee and comparison groups for women were not adequately matched on child-responsibility status. According to the final follow-up report, almost none of the female corps member sample initially had children present, but by the time of the final follow-up interview approximately 50 percent of the women had children present. Thus, female Job Corps members with children represented about 2 percent of the sample in the first 6 months of the postprogram period and 15 percent of the sample during the last 6 months of the study period (42-48 months after leaving the program).

In fact, baseline data from an earlier report indicate significant differences between participant and comparison group members, particularly among females (Kerachsky and Mallar, 1977). Approximately 3 percent of the female participants were pregnant at the baseline compared with 12 percent of comparison group females. Female participants were significantly more likely to be black, Hispanic, or members of other minority groups than females in the comparison group (84 percent compared with 62 percent) and also more likely to never have been married (94 percent compared with 73 percent).

The Job Corps studies are among the few we reviewed that did not present data on the characteristics of participants and comparison group members at various stages of the evaluation. Therefore, we are not able to determine the levels of childbearing among comparison group women over the study period. This makes the fertility and family-formation outcomes of Job Corps particularly difficult to interpret: since the participant and comparison groups were apparently not initially comparable, later differences may indicate the presence of self-selection bias. Other studies show that more highly motivated women tend to postpone childbearing and marriage and that the presence of children inhibits program participation. The evaluation design used for the Job Corps does not allow one to determine whether Job Corps participation actually induced delays in childbearing and family formation (see Margaret Simms, in this volume).

The differences in measured characteristics between Job Corps participants and comparison groups members suggest that there may also be differences in unmeasured characteristics (e.g., motivation and aspirations). The possibility of self-selection into the program is a strong argument for the use of a random assignment experimental design, since statistical techniques may not adequately control for the factors that determine program entry and postprogram outcomes.

PROGRAM FOR IN-SCHOOL YOUTHS

New Youth Initiatives in Apprenticeship

The New Youth Initiatives in Apprenticeship program sought to promote the use of registered apprenticeship positions, outside the construction trades, by developing linkages between the schools and employers with registered apprenticeship positions. Employers were provided subsidies for one-half of apprentice wages, up to a maximum of $1,700 per student apprentice year.

The program began operation in four sites in 1977 under the sponsorship of the Department of Labor's Bureau of Apprenticeship Training; one of those sites operated for only 1 year. Four additional sites were funded by the Office of Youth Programs in 1978, bringing the total number of sites operating in 1978 to seven. According to the evaluation (Williams et al., 1981:6): "The new [OYP] projects included targeting economically disadvantaged students to participate as student apprentices, an activity not specifically mandated in the original demonstration effort." Despite this, the data indicate that the newer projects may have been less successful in enrolling minorities than the more established projects.

The New Youth Initiatives in Apprenticeship program was reviewed in two reports. The report by Williams et al. was more comprehensive and competent, and we based our assessment on that report alone. The follow-up analysis was based on samples of about 600 student-apprentices and 500 matched comparison group members. The data on the student apprentices indicate that they were generally nonminority (80 percent) and male (89 percent) and had a grade average of B- in high school and a high rate of graduation from high school (96 percent). This program does not appear, therefore, to have reached the heavily disadvantaged segment of the youth population. The results of the participant-comparison group contrasts show, on average, small and not statistically significant differences in annual earnings ($290 above the $10,000 annual average) or wage rates. Apprentices tended to be more concentrated in machine trades occupations and comparison group members in clerical and sales occupations.

The evaluation study also surveyed several hundred employers of the student apprentices in the eight sites where the program operated. The employer survey indicated that three-fourths of cooperating employers were small businesses, employing fewer than 50 workers. Employers appeared to be more attracted by the screening and training functions performed by the program than by the wage subsidies provided. Employers were predominantly in manufacturing (44 percent) and services (38 percent); only 10 percent had unionized work forces. A multivariate analysis indicated that the number of apprentices employed in the postprogram period was positively and significantly related to four factors: the total number of employees; being a manufacturing firm; being a union firm; and the number of years the program had been in operation in the site. Though the evidence was ambiguous, it suggested that those employers who rated stipends as important retained fewer apprentices.

Two aspects of the research design seem worthy of note. First, all of the postprogram interviews were conducted in the last six months of 1980, which provided only 6 months of post-high school data for the 40 percent of the sample from the new sites and, at most, 1-1/2 years of post-high school information for 14 percent of the group. With such a heterogeneous group and relatively short follow-up period, one cannot be sure whether sufficient time had elapsed for program effects to emerge.

Second, the comparison group sample was drawn (after the program began) from the same high schools as the participants. It is natural to question whether there is some selection bias--despite matching on characteristics--since the members of the comparison group presumably either had an opportunity to join the apprenticeship program and did not do so or were specifically not chosen to participate in the program. Since so few significant findings emerged from the participant-comparison contrasts, we did not pursue this issue further.

Because of the characteristics of the participants we cannot determine whether this type of program might be more effective among more disadvantaged youths. In addition, it is difficult to tell whether the failure to enroll significant numbers of more disadvantaged youths is inherent in the nature of the program or simply due to the characteristics of the sites where it was implemented.

Given the character of the participant population and the nature of the program, no generalizations can be drawn from the evaluation of the

New Youth Initiatives in Apprenticeship program to youth employment and training efforts generally.

CONCLUSIONS

While it would be misleading to attribute the Job Corps results to skills training efforts in general, the measured effects of Job Corps indicate that effective skills training can be provided for economically disadvantaged youths. At the same time it is clear on the basis of both Job Corps and the less effective New Youth Initiatives in Apprenticeship program that the staff capacity and other resources needed to mount skills training efforts are not acquired quickly or inexpensively.

6

Effectiveness of Labor Market Preparation Programs

The YEDPA studies we reviewed represented three basic approaches to labor market preparation for youths: (1) career exploration programs, which usually provided information on occupational opportunities and requirements, work habits and attitudes, and job search techniques and sometimes included ability and interest testing; (2) basic educational skills training, usually remedial, which often included General Equivalency Diploma (GED) preparation; and (3) direct work experience, usually combined with some orientation to the "world of work." Most programs offered some combination of the first two approaches, and a few were designed as systematic variations of work and classroom instruction as tests of their relative effectiveness.[1]

The implicit long-term goal of many of the programs, especially the programs focused on out-of-school youths, was to increase the employment opportunities and economic self-sufficiency of youths. It was assumed that certain deficiencies--in work habits and attitudes, basic educational skills, and understanding of job interests and options--were barriers for disadvantaged youths in achieving economic self-sufficiency and that the correction of these deficiencies would solve the problem. Correction or amelioration of these deficiencies, therefore, became the interim objectives of the programs, as well as steps toward the longer-term employment goal.

Labor market preparation programs under YEDPA were provided to both in-school and out-of-school youths, but the majority served in-school youths. Unfortunately, most of the studies on the in-school projects did not meet the committee's criteria of scientific evidence and so are not included in this review. For example, we were not able to evaluate summer programs designed to maintain or improve educational skills of youths over the school vacation or the many career exploration programs offered as a supplement to regular school programs. In terms of numbers of participants, the programs that met our criteria for inclusion and are reviewed here largely involved out-of-school youths, both dropouts and graduates.

---

[1] It is not entirely clear how some programs should be classified, particularly those that provided several alternative treatments (such as the AYES project). We decided to classify them here.

Several of the reports reviewed by the committee indicated that the programs being evaluated, while initially designed to provide occupational skills training, were revised to offer more basic educational and prevocational skills. These changes were necessary because the youths enrolled lacked the skills required for more specific vocational training.

PROGRAMS FOR OUT-OF-SCHOOL YOUTHS

Programs serving out-of-school youths generally served both dropouts and graduates, though the relative proportions varied considerably across the programs. We reviewed four programs for out-of-school youths that we found deserving of mention: Alternative Youth Employment Strategies (AYES), Recruitment and Training Program (RTP) Career Exploration Program, Project STEADY (Special Training and Employment Assistance for Disadvantaged Youth), and the Job Corps Educational Improvement Effort (EIE). Table 6.1 details the characteristics of each of these programs; Table 6.2 details the research design and results of the evaluations of the programs.

Alternative Youth Employment Strategies

The Alternative Youth Employment Strategies (AYES) project was designed to test the efficacy of three alternative models for providing youth employment programs to a particularly high-risk, hard-to-reach group: unemployed, out-of-school (largely dropout) 16- to 21-year-olds, many referred by the juvenile and criminal justice systems. The model treatments were: (1) full-time work experience, with counseling and placement services; (2) full-time classroom instruction in basic educational, vocational, or prevocational training, with counseling, services; and (3) a mixed model of part-time work, part-time training, counseling, and placement. AYES was implemented using random assignment at sites in three cities (New York City, Miami, and Albuquerque) and involved about 1,100 youths.

The Vera Institute study of AYES was of particularly high quality. Although not free of problems, the research seemed to have been conducted as carefully as conditions permitted, given some problems of implementation. Its major finding was that a 26-week, full-time program that concentrated its services on high-risk youths enhanced their chances of securing full-time employment. Differences in employment rates of approximately 10 percentage points were found between participants and a randomly selected control group approximately 8 months after program participation (see discussion of Career Exploration Program below). Positive effects were found at all three sites: the largest program effects were found in New York City and the smallest effects in Albuquerque. At the same time, the demographic nature of the samples varied considerably across the sites, making it

TABLE 6.1 Labor Market Preparation Programs for Out-of-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Sites
Alternative Youth Employment Strategies (AYES)/Vera Institute	Test of three alternative approaches for providing employment training	Alternatives: 1. full-time work 2. full-time classroom training (prevocational and basic education) 3. mixture of 1 and 2	Out-of-school unemployed youths (characteristics varied by site) • up to 75% black • up to 75% Hispanic • 66% male	26 weeks	New York, N.Y.; Miami, Fla.; and Albuquerque, N.M.
Recruitment Training Program (RTP) Career Exploration Program/RTP	Summer instruction in career preparation	Occupational information, basic skills instruction, and job search information	Out-of-school unemployed youths • 82% black • 12% Hispanic • 47% male	10 weeks	Bridgeport, Conn.; Pittsburgh, Pa.; Rochester, N.Y.; and Youngstown, Ohio
Project STEADY (Special Training and Employment Assistance for Disadvantaged Youth)/ETS	Job service summer program to increase employability; programs varied by site	Labor market information, job search training, aptitude testing, and job placement	Out-of-school unemployed youths (graduates and dropouts) (characteristics varied by site) • up to 95% black • up to 92% white • up to 35% Hispanic • 50% male	Up to 12 weeks, 35 hours/week	10 sites
Job Corps Educational Improvement Effort (EIE)/ Team Associates	Test of alternative teaching techniques used in Job Corps basic education program	Variations in math and reading curriculums using various instructional tools (e.g., computers, calculators, television, peer aides)	Participants in residential Job Corps programs	Average: 30 weeks	11 Job Corps sites

BEST COPY AVAILABLE

TABLE 6.2 Labor Market Preparation Programs for Out-of-School Youths: Research Design and Results

Youth Program	Sample Size		Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
	Participant	Control				
Alternative Youth Employment Strategies	1,080	1,137	Random assignment to participant and control groups; participants self-selected alternative strategies	Increased full-time employment • at 8 months + 10% • no differences by alternative treatments	Immediate post-program P = 85% C = 55% 3 months post-program P = 61% C = 51% 8 months post-program P = 69% C = 58%	Demographic characteristics varied by site; not analyzed separately
RTP Career Exploration Program			Nonrandom	Immediate employment 89% versus 53% (control group) • 3 months employment + 7.5% • 8 months employment + 8.2%		Distinct differences in characteristics of participants and controls; data pooled across sites and project years
Project STEADY	768	744	Nonrandom	• gains in job-holding and job-seeking skills (pooled) • increased full-time employment at 3 months 29% versus 17%	Immediate post-program P = 82% C = 68% 3 months post-program P = 78% C = 68% (response rates varied across sites, means are reported here)	Program effects when disaggregated by site were significant in only 2 of the 10 sites
Job Corps Educational Improvement Effort	7,000		Some random assignment; mostly nonrandom assignment of classrooms to alternative methods	Few measured program effects; none deemed reliable	Preprogram to post-program measures • attrition as high as 74% in some cases	Selectivity bias, serious analytical flaws leave results difficult to interpret

virtually impossible to distinguish the independent effects of ethnicity and site.

Differences in outcomes were not accompanied by any changes in the measured attitudes and orientations reported on a series of tests developed by the Educational Testing Service (ETS) that were administered at the conclusion of the program. Nor did these differences in measured attitudes affect the types of jobs that participants obtained. Three interpretations are possible: (1) changes in reported orientations toward employment are weakly related to changes in job-related behavior; (2) the tests were administered immediately after program completion (when attrition rates were relatively lower for both the experimental and control groups, 16 and 45 percent, respectively) rather than at 8 months postprogram, when the job placement comparisons were made (when attrition rates among the experimental and control groups were 31 and 42 percent, respectively); and (3) the tests themselves may be of questionable validity in measuring the attitudes and knowledge they purport to assess.

The Vera Institute study of AYES compared the relative effectiveness of the three treatment strategies at each site. No difference in the effects of the alternative treatment strategies could be discerned. In several other studies, similar null findings for alternative treatments were also found. Indeed, this is the one finding that was fairly robust throughout the studies of labor market preparation programs we reviewed. The only exception was the Special Project for Indochinese Youth. It appeared to show English-language training for Indochinese youths to be more effective if based in the classroom instead of in a job context.

This null finding parallels a similar finding in educational research that shows little difference in the employment effects of vocational and general education. Three explanations are possible: (1) the types of instruction have equal effects; (2) students select the type of program best suited to their needs (a choice among the three types of programs was generally left to the individual), and effects appear equal because each type of instruction is provided to that group of students for whom it is best suited; and (3) sample sizes are too small to detect small differences in outcomes controlling for site, treatment, and other variables.

RTP Career Exploration Program

The Recruitment Training Program (RTP) Career Exploration Program provided summer instruction in career preparation to economically disadvantaged, unemployed out-of-school youths, both dropouts and graduates, in several cities. Services, including occupational information, job search information, and basic skills instruction, were provided to 16- to 21-year-olds during the summers of 1979 and 1980.

The study of RTP shows positive effects of the program. Participants showed larger gains on a variety of ETS-developed measures of job satisfaction and vocational aspiration than a randomly selected control group. In addition, participants were more likely to be employed full time at program completion than control group members, 89 percent compared with 53 percent. The favorable full-time employment experience of participants persisted at the time of the 3- and 8-month follow-ups and even increased slightly: a difference of 7.5 percentage points at 3 months and of 8.2 percentage points at 8 months.

The gains reported for this less intensive summer program were as large as the gains reported for the full 6-month AYES program studied by Vera. The findings could be attributed to the fact that the RTP Career Exploration Program addressed a less disadvantaged population: approximately 25 percent of treatment and control group members were enrolled in college at the 3- and 8-month follow-ups. It is also likely that the assignment of youths to participant and control groups in the Career Exploration Program was not strictly random--sizable differences in the two populations can be discerned on the basis of preprogram characteristics within sites, such as high school graduation, welfare recipiency, ethnicity, and age (20 to 30 percent of participants and controls were 20-21 years of age). These considerations, combined with the fact that the analysis takes no explicit account of the program year or site, suggests that the findings in this case are not as reliable as those from the Vera study.

Project STEADY

Special Training and Employment Assistance for Disadvantaged Youth, Project STEADY, operated during the summer of 1980. Its purpose was to determine the feasibility and effectiveness of the employment service's local office efforts to increase the employment and employability of unemployed out-of-school (graduate and dropout) youths who had no further educational plans and no immediate employment prospects. Participants, whose ages ranged from 16 to 21 and who were otherwise eligible for the Summer Youth Employment Program, were required to participate 35 hours per week at the minimum wage ($3.10 per hour) for up to 12 weeks. Program activities included aptitude and achievement testing, counseling, labor market information, job search training, and referral to and placement in unsubsidized jobs. Ten sites were selected for the project. The nature of the treatment varied considerably across the sites; site directors had complete discretion in selecting those services, materials, and emphases they thought most appropriate.

The evaluation of Project STEADY is based on data for approximately 600 participants and 400 controls at 3 months postprogram. Data from a longer term follow-up are not available. Personal characteristics of both controls and participants varied a great deal among the sites, although the initial assignments to control and participant groups within a site were random: program applicants were initially tested and then randomly assigned to participant and control groups. Attempts were made to make up for participant attrition by accepting control group individuals as participants. The author of the evaluation report had no information as to how control group members were selected to be participants. In addition, attrition in the 3-month follow-up period was significantly higher among control group members (about one-third) compared with participants (one-fifth).

Project STEADY employed two measures from the Standard Assessment System (SAS) as appropriate to both the target population and the program objectives: job-holding skills and job-seeking skills. Both a pretest and a posttest consisting of the two SAS measures were administered to the participants and controls. Performance outcome measures were used in a program completion survey administered to participants after 12 weeks of program participation and in a control group status survey administered to controls at the same time. In addition, performance outcome measures were used in follow-up surveys (3 months) after termination of program participation for participants and at the same time for controls. Information on individual characteristics of participants and controls was taken from the individual participant profile of SAS.

There were relatively small numbers of participants and controls at any given site. Alternative statistical tests were used to gauge the effectiveness of Project STEADY. Statistically significant gains for participants relative to controls were found in both job-holding skills and job-seeking skills when sites were pooled. However, on an individual-site basis, only 2 of 10 sites revealed statistically significant gains for participants relative to controls in job-holding skills and job-seeking skills. At most of the remaining sites, the gains of participants relative to controls were not statistically significant.

The 3-month follow-up survey revealed that when all sites were pooled, the percentage of participants who were employed full time exceeded that of the controls by a large and statistically significant amount: the adjusted probabilities of full-time employment are estimated to be 29 and 17 percent for participants and controls, respectively. On an individual-site basis, only the three sites with large samples exhibited statistically significant full-time employment differences, all in favor of participants. The percentage of participants reporting being employed in jobs of higher status exceeded that of the controls by a statistically significant amount when pooling all sites. On an individual-site basis, however, there were no statistically significant differences in job status. There were also no significant differences in earnings or in job satisfaction between participants and controls.

After adjusting for heterogeneity between the participant and control groups at the 3-month survey, the evaluators found that of the 40 possible outcomes included, 10 yielded statistically significant differences, all in favor of participants (relative job status was no longer significantly different). These outcomes included full-time employment, financial contribution to one's family, two measures of future job quality, and getting along with one's family.

Very little information pertaining to race, sex, or age differences in program gains is available from the evaluation of Project STEADY. A multiple regression analysis was conducted in which posttest scores were regressed on pretest scores and demographic characteristics. For all sites taken together, females experienced statistically significant smaller gains than males in both job-holding and job-seeking skills. Practically, however, these meant small actual differences in scores.

On the other hand, there were no statistically significant differences by race and age.

There were certain implementation problems associated with Project STEADY as a demonstration project that need not occur under a permanent program. Due to the brief start-up time, there was difficulty in recruiting participants. Lack of time and resources caused difficulties regarding planning, curriculum development, and the necessary outreach to potential participants, as well as the creation of a true control group (as discussed above).

Overall, the evidence indicates some positive effects of Project STEADY on the short-term employment prospects of youths. While the precision of the estimated gains is questionable because of data difficulties, the qualitative effects can probably be accepted. However, statistical significance, where found, was typically the result of pooling the data across sites, and therefore we have questions about whether the evaluation of Project STEADY demonstrated that the program could have a substantial positive impact on a significant number of young people facing employment difficulties.

Job Corps Educational Improvement Effort

The purpose of the Educational Improvement Effort (EIE) was to improve the educational offerings of Job Corps to provide corps members with the best opportunities for learning at all levels. To meet these objectives, new or revised curricula were developed for basic skills in reading and mathematics and high school level skills in all areas. Programs were tested in an experimental design to provide information concerning their effects on educational progress and process (Argento et al., 1982). The Job Corps Educational Improvement Effort (EIE) is noteworthy in its attempt to use random assignment of Job Corps participants to treatment and control groups to test alternative teaching techniques.

The programs evaluated included: (1) a reading curriculum that used materials revised from earlier Job Corps reading programs; (2) a calculator mathematics program that provided instruction and experience in the use of hand-held calculators; (3) a reading program using "peer aides" to help instructors in the reading program deal with the instructional needs of their students; (4) a program offering participants the opportunity to obtain a regular high school diploma rather than a GED; (5) a GED program that used televised instruction; (6) a computer-assisted education program using the Comprehensive Computer Program to help students with reading and mathematics; (7) the PLATO system of computer-assisted instruction; (8) two curriculums to help students with learning disabilities--one developed by the University of Florida and the second by the University of Kentucky; and (9) two curriculums designed to improve the "employability skills" of participants, the Adkins Employability Skills Series Program and the American Preparatory Institute Program.

Over 7,000 Job Corps members in 11 centers took part in one or more of these programs. Because participants could enter or leave the program at any time, attrition in posttest data was substantial for many treatments and sites: for example, 74 percent among controls in the mathematics component of the Comprehensive Computer Program model (Argento et al., 1982:Table 1.4-1).

The assignment of participants to treatment and control groups is described as follows (Argento et al., 1982:1-5):

> Potential participants were randomly assigned to either the experimental group or the control group, to the extent possible. Unfortunately random selection was not always possible. In one large Job Corps Center, for example, a decision was made to place all students in the same vocational training area in the same educational classes. Thus all students interested in automobile mechanics were in one mathematics class, all those interested in nursing in another, and so on. With this system, it was impossible to maintain true randomization. . . .

While the report is forthright about such problems, it does not present separate analyses for the "true" random assignments, and so it is not possible to estimate the biases that might have been introduced by such administrative decisions to abandon randomization at some sites.

The key analysis performed for each of the programs uses preprogram to postprogram differences in Stanford Achievement Test (SAT) scores as the dependent variable in an analysis of covariance in which "treatment" is the independent factor and the covariates include sex, age, race/ethnicity, highest grade completed in school, hometown size, whether family receives welfare, and score on SAT pretest. The reported analyses do not consistently include all variables, apparently because a stepwise inclusion procedure was used.

Gains in test scores are measured in "grade equivalent" years in order to gauge treatment effects on educational attainment. Thus, postprogram minus preprogram scores are divided by the number of hours in the program: a 100-hour program that raised performance by two grades would show a gain of 2/100, or .02. Gain scores are then adjusted for the covariates included in the analysis.

Few of the treatments produced significant results; for those that do appear significant selectivity bias cannot be ruled out as an important factor. Thus, we did not find the evidence on the differential effectiveness of the Job Corps EIE convincing.

PROGRAMS FOR IN-SCHOOL YOUTHS

This section discusses three programs that predominantly or exclusively served in-school youths: the Career Exploration Program, the School-to Work Transition program, and Project Redirection. Table 6.3 details program characteristics; Table 6.4 presents the research design and results of the program evaluations.

TABLE 6.3 Labor Market Preparation Programs for In-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Sites
OIC/A Career Exploration Program/Center for Studies in Social Policy	Summer career exploration	Classroom instruction, on-site career exposure, and follow-up counseling	In-school and out-of-school youths • 24% ex-offenders • 19% dropouts • 78% black • 13% Hispanic • 52% male • 4% graduates	10 weeks	7 sites
National Puerto Rican Forum (NPRF) School to Work Transition Program/ETS, 1979 Study;	Career exploration as a means of easing transition from school to work	Workshops in self-awareness, pre-employment skills, job exploration	In-school youths • largely Puerto Rican high school seniors	5 hours/week during senior year (average contact hours/year = 30)	2 schools each in Chicago, Ill.; Jersey City/Hoboken, N.J.; and South Bronx, N.Y.
ETS, 1980 Study			Shifted to high school freshmen • lower economic status • lower cognitive skill measures than 1979 group		2 schools each in Hartford, Conn., and San Juan, Puerto Rico, added; 1 school in Jersey City withdrew
Project Redirection/MDRC, AIR	Comprehensive counseling and support services for pregnant and parenting teens to increase long-term personal and economic self-sufficiency	Educational, health, family planning, and employment-related services	Non-high school graduates, pregnant and/or parenting • less than 17 years old • 48% black • 38% Hispanic • economically disadvantaged	Average: 12 months	Boston, Mass.; Harlem, N.Y.; Phoenix, Ariz.; and Riverside, Calif.

BEST COPY AVAILABLE

TABLE 6.4 Labor Market Preparation Programs for In-School Youths: Research Design and Results

Youth Program	Sample Size Participant	Control	Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
OIC/A Career Exploration Program	1,500	800	Varied by site--some random, some not	School retention P = 73% C = 62% Significant reduction in crime	8 months P = 77% C = 80%	Significant differences between participants and, controls in sex, race, school attendance, and offender status; differential attrition by race; both effects correlated with preprogram differences in participants and controls
NPR Forum School-to-Work Transition, 1979 Study	205	314	Comparison groups of nonparticipants in same schools	Results not reliable for 1979 program	8 months P = 50% C = 38%	Comparison group significantly different in background characteristics from participants, differential attrition by income and race
1980 Study	260	302		Positive effect on employment Negative effect on school retention Positive effect on all SAS battery items	3 months	Inaccuracies in reporting make results questionable
Project Redirection	305	370	Nonrandom; comparison group of young women in matched locations	12 months • decreased pregnancies • increased school enrollment • increased paid employment 24 months • significant cumulative impacts in education and employment • no significant impacts at 24 months except for selected subgroups	12 months after enrollment P = 70% C = 93% 24 months after enrollment P = 55%	Significant differences in characteristics of participants and controls. 24-month analysis pools 2 periods of operation.

BEST COPY AVAILABLE

OIC/A Career Exploration Program

The Opportunities Industrialization Centers of America, Inc. (OIC/A) operated the Career Exploration Program in seven sites during 1980. The design of the OIC/A program was similar in many respects to that of programs offered by RTP and other community-based organizations; it involved a 10-week summer program providing classroom instruction for 2 hours per day and career exposure site experience (work experience) for 4 hours per day. A follow-up component extended for 8 months after the summer program and included review classes, counseling, referral services, and a newsletter designed to reinforce skills learned in the program.

The OIC/A program served a predominantly minority clientele (78 percent black, 13 percent Hispanic) of 16- to 21-year-olds; nearly half of the participants were female (48 percent). Because an express aim of the program was to serve high-risk youths, about 24 percent of the participants were ex-offenders and 19 percent were dropouts; 75 percent of the participants were high school students, 4 percent were graduates, and 1 percent had received GED degrees. No data were provided on cross-site differences in participant characteristics.

While participant and control group members were similar in terms of age and economic status, they differed significantly in other preprogram characteristics. Participants were more likely to be female (48 percent of participants compared with 37 percent of controls); attending high school (75 percent compared with 68 percent), and black or Hispanic (90 percent compared with 84 percent). By design, controls were more likely to be youth offenders than were participants, though the actual proportions differed from the planned 50 percent and 33 percent: 49 percent of controls were offenders while only 24 percent of participants were.

The differences between the two groups suggest that random assignment was not strictly followed, at least at some of the sites, and the evaluation report itself suggests as much. While overall attrition at 8 months was reasonable for studies of this kind (23 percent for participants and 20 percent for controls), differential attrition among black participants eliminated the significant difference in racial composition that had existed earlier between the experimental and control groups.

The evaluation results indicate that the participants' school attendance improved and their criminal recidivism was reduced at 3 and 8 months postprogram compared with a randomly assigned control group. The analysis by the Center for Studies in Social Policy of the data for nearly 1,500 participants and 800 controls at 8 months postprogram indicates that continued school attendance was significantly higher for participants than controls: 73 percent compared with 62 percent. Given the initial differences between the two groups on school and offender status, however, and the fact that being in school at program entry was found to be positively associated with being in school at the follow-up, it may not be surprising that participants compare favorably with controls on this measure. Because it is not clear that random assignment was effectively carried out and the results are confounded with preprogram characteristics, it may be erroneous to treat postprogram differences as program outcomes.

National Puerto Rican Forum

The National Puerto Rican Forum's (NPRF) School-to-Work Transition program was designed to serve approximately 150 (largely) Puerto Rican in-school youths in each of various sites to "enable the participants to better understand and identify their strengths and weaknesses, facilitate the transition from school to work, and enhance their ability to select a career" (Murphy and Appel, 1981:13). Services were intended to include workshops in self-awareness, preemployment skills, and job exploration for 5 hours per week during the school year. Actual contact hours averaged fewer than 30 in each site.

In the initial year of the program, 1979, services were provided to high school seniors attending two schools in each of three sites, Chicago, Jersey City/Hoboken, and New York (South Bronx). In the following year, apparently due to a concern that many needy Puerto Rican youths leave school before senior year, the program shifted its focus to serving high school freshmen, lost one of the Jersey City schools, and added four high schools, two in Hartford and two in San Juan.

Because of the program's focus on high school seniors, it may be appropriate to view the 1979 program as similar to job placement efforts (such as Jobs for Delaware Graduates or Project BEST, discussed in Chapter 9). As such, the nature of the comparison group and the relative experiences of the two groups become important. While initially based on an experimental design, random assignment was abandoned due to insufficient sample sizes, and all youths expressing an interest in the program were allowed to participate. Comparison group members were high school seniors from the same schools as participants. No information is available on the procedures used to select comparison group members, who differed considerably from participants: comparison group members included fewer Hispanics and more blacks, had higher family economic status, and had less prior employment.

Attrition among both participant and comparison group members at the 8-month follow-up (50 and 62 percent, respectively) was particularly high for participants who were Hispanic and from low economic status households, while attrition among comparisons was highest for black males. Due to the attrition pattern, the initial differences in characteristics between the two groups largely disappeared. Moreover, the resulting sample sizes, 102 participants and 130 comparisons, were inadequate for reliable quantitative analysis. Therefore, no valid inferences can be drawn about the effectiveness of the 1979 NPRF program.

The program that operated during the 1980-1981 academic year served high school freshmen for an average of 33 contact hours during the school year (Trismen, 1982). About 83 percent of participants were Hispanic, 57 percent were female, and 85 percent were from families with incomes no higher than 70 percent of the lower living standard of the Bureau of Labor Statistics. While no information is provided on how comparison group members were chosen, the demographic characteristics of the comparison group very closely matched those of participants. Participants and comparisons in the second year program were, of course, younger than those who participated the previous year; they were also of lower economic status, had less prior employment experience, and scored lower on pretests on a variety of cognitive measures.

At program exit, participants exhibited significantly larger gains than did comparisons on each of the seven items in the SAS test battery.[2] This is in contrast to a finding of no significant differences in gains for participant and comparison group members during the previous year's program.

Postprogram results are available only at 3 months after program completion for 61 percent of participants (260) and 65 percent of comparison group members (302). Statistically significant findings that favored the participant group related to the degree of job knowledge, the proportion working full time or part time (40 percent and 29 percent), and the extent to which family members felt good about the program (or "how you've been doing" for controls). As seems appropriate for a program serving in-school youths, the employment outcome largely reflects part-time employment.

At the time of the 3-month follow-up in early fall of 1981, about 86 percent of the respondents were in school. While participants were significantly less likely to be in school at the follow-up than comparison group members, other things equal, the actual difference was small: 85 percent compared with 87 percent. Overall, participants in the 1980-1981 program performed significantly better immediately postprogram than nonparticipants on a variety of cognitive measures. Three months postprogram, participants were somewhat more likely than comparisons to be employed full time (2 percent compared with 1 percent) and much more likely to be employed either part time or full time (40 percent compared with 29 percent), but they were also somewhat less likely than comparison group members to be enrolled in school. Thus whether the program intended to or not, it did not increase school retention. Although the evaluation of the 1980-1981 NPRF program provided promising results, it provided insufficient information on how the comparison group was formed. Therefore, we cannot be confident about the results for either year of the NPRF program's operation.

---

[2] Gains were measured in terms of percentages of standard deviations, and the magnitudes averaged 34-65 percent across all sites (Murphy and Appel, 1981). Gains of 10 percent or more were considered to have practical significance.

Project Redirection

Project Redirection was designed to provide pregnant and parenting women aged 17 and younger who had not yet graduated from high school with educational, health, family planning, and employment-related services for up to 18 months. Its goal was long-term personal and economic self-sufficiency. It operated in four sites--Boston, New York (Harlem), Phoenix, and Riverside (California)--from mid-1980 to 1983. About 48 percent of participants were black, 38 percent were Hispanic, and 13 percent non-Hispanic whites. The average age of participants was 16, 56 percent were pregnant (not yet parents), and 52 percent were in school at the time of the baseline interview.

Project Redirection was noteworthy for its development of a comprehensive program of counseling and supportive services for young women from low-income backgrounds who were pregnant or mothers. While the program seemed innovative and promising, the evaluation findings are unclear. The interim report on program effectiveness considered about 180 participants and 200 comparisons at only 12 months after enrollment in the program, when most young women were still participating or had only recently left the program. The findings indicated that participants were less likely to have a repeat pregnancy (17 percent compared with 22 percent) and more likely to be enrolled in school or have completed school or a GED program (66 and 50 percent, respectively).

However, a later report at 24 months after enrollment in the program showed Project Redirection youths on the whole fared no differently than comparison group youths on a variety of outcomes. There were no significant differences in the number of repeat pregnancies, in school enrollment or completion, or in employment.

While the evaluation design of Project Redirection was superior to that of other programs for pregnant and parenting youths, several shortcomings limit our confidence in the findings. The comparison group approach used matched sites in the same regions, but several significant differences between comparison and participant group members at baseline suggest that the two groups were not comparable. For example, controls were more likely to be attending school (70 percent compared with 52 percent), had had more pregnancies, and had previously enrolled in a teen parent program (44 percent compared with 23 percent). Attempts to adjust for selectivity bias produced no difference in the results.

In addition, the comparison group members received many of the same services provided to participants in Project Redirection. Thus, rather than being a test of the effect of providing services, per se, the demonstration is more appropriately seen as the test of the relative effect of the Project Redirection service provision strategy compared with others. The possibility therefore exists that the results understate the true program effects.

In order to enlarge the participant sample by nearly one-half (from 180 to 350 participants), a second sample was formed with treatment group members who participated in the program between March 1981 and January 1982, about a year after the original sample members were given baseline interviews. They were added to the analysis along with

TABLE 6.5 Selected Project Redirection Outcome Differences

Outcome	First Sample	Second Sample
Percentage with pregnancy subsequent to baseline		
at 12-month interview	- 9*	- 8
at 24-month interview	- 7	+ 2
Percentage with live birth subsequent to baseline at 24-month interview	- 9	- 2
Percentage ever enrolled in school between baseline and 24-month interview	+11*	+25*
Percentage employed at 24-month interview	+ 1	- 4

NOTE: Adjusted participant group mean minus comparison group mean.

*Statistically significant at the .05 level or below in a two-tailed test.

SOURCE: Polit et al. (1985).

additional comparison group members. The numbers of additional sample members were not uniform across the sites. Various techniques were used to overcome the lack of comparable baseline data for members of the second sample, including the use of retrospective data and estimation.

The data for the two samples are pooled in most of the analyses even though the treatment period covered different time periods (and therefore possibly somewhat different program offerings) and members of the second sample participated for a significantly shorter period of time, 9.9 compared with 12.9 months. The pooling of the two samples may account, in part, for the apparent decline in program effects between the 12-month and 24-month results. The interim report results rely exclusively on data from the initial sample while the 24-month results include data from the second sample, which account for a significant share (40 percent) of the total. When results at 24 months are reported separately for the two samples, participant outcomes for the first sample are generally more favorable with respect to the comparison group than those of the second sample: for example, outcomes are better in terms of the number of repeat pregnancies, the number of live births, whether the participant is employed, and a variety of other measures (see Table 6.5).

Although the overall attrition rate of 14 percent for the first sample was relatively low for a study covering 2 years, there was significantly more attrition among participants (21 percent) than among comparison group members (7 percent). Attrition rates for members of the second sample are more problematic: only 55 percent of those who participated were given the 24-month interview. Attempts to adjust for attrition bias using the Heckman (1979) procedure produced no changes in estimated program effects, although this was as likely due to the difficulty of modeling attrition as to any other explanation.[3]

Finally, due to the nature of the sample design, site effects are confounded with race/ethnicity effects. The Harlem site was largely black (92 percent), Boston was predominantly Puerto Rican (96 percent), and Phoenix and Riverside were the only sites with white non-Hispanic participants (9 and 40 percent, respectively) and with significant numbers of Mexican-American participants (42 and 24 percent, respectively).

Because of the many methodological difficulties inherent in the evaluation, we do not believe that reliable conclusions about the effectiveness of Project Redirection can be drawn.

CONCLUSION

Programs offering labor market preparation were the largest single category of programs we reviewed. Although 15 reports met the committee's standards of evidence for determining program effectiveness, many suffered from serious methodological deficiencies that led to questions about their results.

The results of several studies (mostly of programs for out-of-school youths) were of sufficient reliability to be examined for their implications for youth policy: the Alternative Youth Employment Strategies (AYES) project, some career exploration programs (those operated by OIC/A and RTP, in particular), and Project STEADY.

Overall, the results of these studies suggest that most labor market preparation programs for out-of-school youths have at best only marginal effects on employment, and there is some hint that the effects may decay fairly rapidly (3 to 8 months) after participants leave the program. A comparison of the 26-week program with programs of 10 to 12 weeks suggests that the same marginal gains in employment can be achieved as well by a shorter program, although differences in target group characteristics and treatments suggest caution in generalizing this particular finding. The effects of the programs on job attitude and orientation, if reliably measured, are also marginal. The lack of a relationship between these measures and employment gains raises interesting issues about the goals of these programs (many of which were supposed to have focused on changing youths' attitudes and motivations) about attitude measurement, and about the relation of job attitudes to employment.

---

[3] As a practical matter, it is when the use of these techniques produces change in the estimated results that the presence of selection bias is indicated. When selection bias adjustment techniques produce no change in the estimates, it can either be due to the absence of selection bias or the inability to properly identify the factors that differentiate participants from nonparticipants. Thus, when the application of these techniques produces no change in the estimated effects, it implies nothing about the presence or absence of selection bias.

The results of these studies raise many other interesting questions that, unfortunately, we cannot answer because of deficiencies in the research. Programs were operated in many sites, with variations in program approach and target group characteristics, but when the data were analyzed and the results presented, those differences were not examined, often because of insufficient sample sizes. Across and within sites, different groups of participants received similar services, perhaps with varying effects, but again most evaluations did not include separate analyses: for instance, for in-school compared with out-of-school youths; for dropouts compared with high school graduates; for males compared with females; or by race and ethnic subgroups. When a program has an effective outcome, we know little about why it works or for whom. Similarly, when there is no effect or no difference in effect, as in the AYES project, we cannot identify the reasons for the particular finding. Yet such information would help identify possible effective approaches to youth employment problems.

Many of the labor market preparation studies produced by the YEDPA knowledge development effort are not discussed in this report because we found their methodological deficiencies too serious to allow reliable interpretations of their results. The most common shortcomings in these evaluations were the inadequacy of the control or comparison groups and sample attrition. In most cases, the "control" group was sufficiently different from the participant group in important characteristics that there was reason to suspect differences in unmeasured characteristics as well, which makes the attribution of changes in outcomes as due to the program questionable. In many other cases, although a requirement for random selection was stated as a planned feature of the research design, the randomization of participants and controls was abandoned. In still other cases, the comparison group consisted of participants in another program, resulting in probable underestimates of program effects relative to those based on a truly untreated control group. Appropriate techniques for following up program participants and comparison group members were rarely used. Not only was attrition in the 3- to 8-month period following program completion often in excess of one-third, but differential patterns of attrition raised serious questions about the validity of purported results.

7
Effectiveness of Temporary Jobs Programs

Programs providing temporary subsidized employment have been a mainstay of youth employment and training efforts in the United States since the War on Poverty. The committee reviewed five reports on YEDPA programs that provided temporary jobs for youths. Three served out-of-school youths exclusively: Ventures in Community Improvement (VICI), Supported Work, and the Public Versus Private Sector Jobs Demonstration Project. Two were designed primarily for in-school youths: the Summer Youth Employment Program (SYEP) and the Youth Incentive Entitlement Pilot Projects (YIEPP).

PROGRAMS FOR OUT-OF-SCHOOL YOUTHS

Table 7.1 presents the characteristics of the three programs serving out-of-school youths. Table 7.2 summarizes the research design and results of the evaluations of those programs.

Ventures in Community Improvement

Ventures in Community Improvement was a demonstration project operated under the Youth Community Conservation and Improvement Projects (YCCIP) part of YEDPA. The target population consisted of youths aged 16-19 who were out of school, had employment difficulties, or were economically disadvantaged (eligible for CETA). The program provided participants with up to 12 months of work experience (on average, participants stayed for 6 months) on construction projects to improve public or low-income housing. Participants were supervised by union journeymen at a ratio of 6 to 1. Job placement assistance was provided to those completing the program, and participants were actively encouraged to complete a General Equivalency Diploma (GED) program. One objective of the project was to determine the impact of the program on participants' subsequent labor market outcomes. Other objectives were to test the feasibility of replicating the program model on a broader scale and to find a way to measure the value of the community housing improvements produced under the program. In all, there were eight sites involving a total of 1,500 participants. The demonstration

TABLE 7.1 Temporary Jobs Programs for Out-of-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Number of Sites
Ventures in Community Improvement (VICI)/ Corporation for Public/ Private Ventures	Work experience on community improvement construction sites	Union journeymen supervised construction projects, emphasis on construction skills and GED completion	Out-of-school youths • 74% dropouts • 16-19 years old • 79% black • 15% Hispanic • 82% male	Up to 12 months x = 6 months	8
Supported work (school dropouts)/ Mathematica, MDRC	Subsidized work experience gradually approximating conditions of unsubsidized employment	Work experience featuring peer support, graduated stress, and close supervision	High school dropouts • 17-20 years old • 73% black • 19% Hispanic • 88% male	Up to 12-18 months depending on site	5
Public Versus Private Sector Jobs Demonstration Project/ St. Louis University Center for Urban Studies	Test of effects of subsidized work experience in public versus private sector on postprogram employment	Work experience	Out-of-school youths • 18-21 years old • 76% dropouts • 64% Black • 47% male	25 weeks (44% completed the program)	5

BEST COPY AVAILABLE

TABLE 7.2 Temporary Jobs Programs for Out-of-School Youths: Research Design and Results

Youth Program	Sample Size		Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
	Participant	Control				
Ventures in Community Improvement	805	1,244	Comparison groups of HUD and other YCCIP construction projects and "controls" from VICI waiting lists	• Increased employment • Increased apprenticeship • Increased earnings + $322/quarter	1 month P = 43% C = 22% 3 months P = 45% C = 32% 8 months P = 37% C = 35%	Use of treated comparison groups tends to underestimate effects; participants' characteristics differed significantly from comparison groups'; high attrition and pooling of data over follow-up periods plus other research design flaws make results highly questionable
Supported Work (school dropouts)	570 161	682	Random assignment	In-program effects • first 9 months - employment +27% - earnings +$146/month - hours worked +52% • 12 months - employment +19% - earnings +$92/month - hours worked +29/month • 18+ months - no significant effects	9 months post-enrollment, 83% 18 months post-enrollment, 76% Resurvey,[a] 60%	
Public Versus Private Sector Jobs Demonstration Project	Total = 2,100		Random assignment; eligible youth pairs matched on age, race, sex, and reading scores; randomly assigned to public and private sector jobs	At 3 months • employment of program completer[b] public = 50% private = 64% • enrollment in education/training public = 26% private = 18% At 8 months • employment of program completers public = 52% private = 61%	3 months post-program T = 43% completers = 54% 8 months post-program T = 35% completers = 42%	High attrition seriously compromises reliability of results

---

[a] Based on long-term follow-up survey up to 4-1/2 years after enrollment (see Maynard et al., 1982).

[b] Results are presented for total sample and for those who completed the program. Since attrition in the total sample is high (57%) only the results of program completers are reported here.

BEST COPY AVAILABLE

was implemented between September 1978 and February 1979 and concluded in all sites in September 1980.

Comparison groups were derived from three sources: participants in YCCIP programs run by the Department of Housing and Urban Development (HUD; operating under an interagency agreement with the Department of Labor) in four sites that overlapped VICI; youths in formula-funded YCCIP construction programs in three sites; and youths randomly selected from VICI waiting lists after the programs were fully enrolled with youths judged to be the most motivated. According to the evaluation report, objections raised by the Department of Labor and a pressing need to launch the VICI project without further delay were cited as the reasons for not following a true randomized evaluation design. Unfortunately, few detailed data on participants in non-VICI programs are provided and no data are provided on comparison group members drawn from the VICI waiting lists.

Postprogram follow-up data were obtained from interviews administered to comparison groups as well as the VICI participants at 1 month, 3 months, and 8 months postprogram. Final samples used for estimating effects varied from 160 to 500 VICI participants and from 160 to 650 comparison group members.

Although long-term program effects could not be estimated, the statistically significant estimated short-term effects of VICI relative to individuals drawn from VICI waiting lists were (1) an increased probability of employment; (2) an increased probability of being in an apprenticeship position or on an apprenticeship waiting list; and (3) higher quarterly earnings (a maximum of $1,050 with an average effect of $322).[1] Not surprisingly, comparisons among VICI, HUD, and other YCCIP participants failed to identify a dominant program. All of the effects of VICI participation were estimated after controlling for demographic characteristics, geographical location, and the date of the participant's most recent interview. The evaluation report states that personal characteristics did not exhibit statistically significant effects on outcomes, while site differences did, but these results are not shown in the report.

The evaluation design of the study is seriously flawed in several respects. The nature of the various programs used to make comparisons with VICI, as well as the participants, differed from VICI. The YCCIP programs often served 10 or fewer youths, and the HUD and VICI programs usually enrolled more, up to 120 and 60, respectively. In addition, both the supervisory ratios in the programs and the nature of the work differed from VICI. VICI programs were construction oriented; the HUD and YCCIP programs included less skilled activities, usually landscaping and neighborhood cleanup (in YCCIP). VICI participants were older and less likely to be enrolled in school.

---

[1] The analyses of outcomes are based on various multivariate techniques, including binomial logit, log-linear regression, and tobit analysis. The interpretation of the program effects therefore varies. For example, the finding with respect to employment is that the likelihood of employment is 111 percent higher among VICI participants than among "controls." This finding implies that for a participant whose probability of employment was 0.5 prior to the program the probability would be about 0.68 after participating; one whose employment probability was 0.9 prior to participating would have a probability of 0.95 of being employed after participating in the VICI program.

Because of high sample attrition (only 37 percent of the VICI participants and 35 percent of the combined comparison groups were interviewed at the 8-month follow-up), the data actually used for assessing program effects consisted of the most recent interview data for each participant who was interviewed at least once after program completion. In addition to the lack of equivalence in geographical coverage, the follow-up sample for VICI participants differed not only from the general VICI participant population but also from the HUD and YCCIP comparison groups. The study could not determine what, if any, biases would be present as a result of differences between the follow-up samples and the total client populations.

Given the severe shortcomings of the evaluation design, what, if anything, can be learned? The report may provide reliable insights and documentation regarding implementation and program delivery issues. Some attention was paid in the report to the optimal degree of site adherence to a standard plan and latitude for across-site variations to accommodate local conditions. The report clearly identifies the fact that referral agencies had little incentive to refer potential clients to the competing VICI project. The educational link is shown to be weak: educational institutions had little incentive to play an important role in the project. Moreover, participants lacked the energy and motivation to pursue adult education at the end of a day on a construction project. The involvement of union journeymen as crew supervisors turned out to be particularly helpful in job placements because of the journeymen's knowledge of the informal labor market and their contacts; their referrals and recommendations carried more weight than comparable activities by CETA job developers.

Although an evaluation of the long-term program effects is ruled out by the small sample size and limited follow-up period, the study does attempt a benefit-cost analysis of the program from a societal point of view. Under a variety of alternative assumptions, the present value of the benefits consistently exceeds the present value of the costs. However, benefit-cost calculations are only as credible as the underlying estimated program effects, and the evaluation study fails to provide reliable evidence on the effectiveness of the VICI program in changing the employment and earnings prospects of disadvantaged young people.

Supported Work

Supported Work was a national demonstration program begun in 1975. The program concentrated on four target groups: women who had been receiving Aid to Families with Dependent Children (AFDC) for several years; ex-addicts; ex-offenders; and young (17- to 20-year-old) high school dropouts. Five of the 15 sites enrolled dropouts. Dropouts participating in the program had no immediate plans for further education and were without immediate employment prospects; many had a history of delinquency. Supported Work sought to inculcate participants with the necessary work habits, desire for employment stability, skills, etc., for future labor market success; these were to be achieved through subsidized work experiences that would be gradually more demanding and approximate regular unsubsidized employment.

Three aspects distinguish the Supported Work program: (1) peer group support; (2) graduated stress; and (3) close supervision. The peer group aspect was implemented through the assignment of individuals to work crews consisting mainly of program participants, and this aspect was accomplished in a more or less consistent fashion across sites. Graduated stress was intended to expose the participant to increasingly higher performance standards that eventually corresponded to those typical of regular, unsubsidized jobs. There was a good deal of variation across sites in how this program aspect was actually implemented. Close supervision was designed to facilitate the transfer and then development of skills, proper work habits, and proper attitudes. Supervisors could be either program staff or nonprogram supervisors from the host employer.

All five Supported Work sites that had youth enrollees participated in the evaluation. Applicants were randomly assigned to experimental and control groups. Those in the experimental group could participate in the program for a maximum period of 12 to 18 months, depending on the site. Both experimentals and controls in the sample were interviewed at baseline and then at 9-month intervals that continued for up to 36 months for some sample members.[3] For purposes of the evaluation study, the enrollment period started in the second quarter of 1975 and lasted until the second quarter of 1977. The maximum length of the postprogram period covered by interviews was determined by when an individual enrolled. On average, youths in the program left it well in advance of the maximum period allotted for participation; only about 18 percent of the enrollees left to take other jobs or to enroll in an educational or training program (Maynard, 1980:Table III.2).

The statistically significant positive effects of Supported Work on employment rates, hours of work, and earnings were largely confined to the period of participation in the program (see Table 7.3). During the first 3 months following enrollment, program participation increased average monthly earnings of participants by $289 (389 percent), average hours worked by 112 hours per month (459 percent), and the probability

---

[3] A special resurvey was conducted over the period July 1980-January 1981. This resurvey provided data covering a period of 38-67 months following initial enrollment. The results of the study did not substantially alter the conclusions reached in the original study (Maynard et al., 1982).

TABLE 7.3 Selected Supported Work Outcome Differences For Young Dropouts

Months After Enrollment	Percentage Employed	Hours Worked Per Month	Average Earnings Per Month
1-3	68*	112*	$289*
4-6	43*	76*	200*
7-9	27*	52*	146*
10-12	19*	29*	92*
13-15	4.3	5	8
16-18	-3.4	-1.8	18
19-21	-0.2	-2.7	13
21-24	1.4	2.3	29
25-27	0.1	-2.5	-9
28-30	-5.3	4.2	-26
31-33	-4.9	-6.2	-33
34-36	-5.2	-5.9	-21
37-39	2.4	0.3	9
40-42	-4.1	-8.7	-31
43-45	-1.4	-2.7	-20
46+	2.1	4.3	18

NOTE: Adjusted participant group mean minus control group mean.

*Statistically significant at the .05 level or below in a two-tailed test.

SOURCES: Data for months 1-15 from Maynard (1980); data for months 16 and beyond from Maynard et al. (1982).

of employment by 68 percentage points (336 percent) relative to controls. By 10 to 12 months following enrollment, these positive effects attenuated dramatically: program participation raised average monthly earnings by $92 (56 percent), average hours worked per month by 29 hours (58 percent), and the probability of employment by 19 percentage points (52 percent). Beyond 13 months from the date of initial enrollment, program participation had no overall statistically significant effects on labor market outcomes as compared with members of the control group. The fact that experimentals had longer job tenure than controls because of program participation had no impact on postprogram employment rates, hours of work, or wage rates (Table 7.3).

Statistically significant program gains in hours of work during the period of actual participation tended to be larger among younger participants, females, whites, the more educated, those who left school because they wanted a job, those living with their parents, those raised by both parents, and those with greater job training in the year prior to enrollment. Supported Work had no long-term impact on education and training decisions or on drug use. Similarly, there were minimal long-term program effects on welfare dependence for youths, and criminal activity was not reduced by the program.

Results of the benefit-cost analysis of the program indicate that from the societal viewpoint estimated costs exceeded estimated benefits by $1,465 per youth participant. While net costs were found to be quite sensitive to the method of estimating the value of output and project costs, none of the alternatives reversed the benefit-cost result.[3]

Overall, the evaluation study appears to have been very careful in its attention to conditioning factors, random assignment, and the use of appropriate statistical techniques. We are therefore confident in the stated finding of no postprogram effect for the severely disadvantaged youths who participated in Supported Work.

Supported Work Youth Variation

Starting in July 1979 four Supported Work sites were selected to participate in a special variation of the program, the Supported Work Youth Variation (Scharfman, 1981). The special variation was directed toward 17- to 20-year-old high school dropouts, many of whom had a history of delinquency. Their experiences in the conventional Supported Work program were unfavorable compared with the outcomes for other targeted groups participating in the program. The variation sought to incorporate features not generally provided in the regular program, e.g., counseling, vocational education, skills assessment, and training; to extend the length of the program to 24 months; and to establish a tangible link to long-term labor market success and thereby improve in-program performance. Unfortunately, there was no comparison group for this follow-up study and therefore we did not find the reported results meaningful.

---

[3] On the basis of a special verification study conducted in three sites among ex-addicts and ex-offenders in the sample, self-reported arrests were found to be underreported by 46 percent, on average, by both experimentals and controls. The study notes that the measured underreporting among those subgroups may or may not be generalizable to the youth sample (Maynard, 1980). Before estimating the value of reduced criminal activity, a factor of 1.7 is applied to the control-experimental arrest differential to correct for underreporting in the benefit-cost calculations. As noted in regard to the Job Corps evaluation (see Chapter 6), no underreporting factor is generally accepted in the criminal justice literature.

Public Versus Private Sector Jobs Demonstration Project

The Public Versus Private Sector Jobs Demonstration Project focused on differences in postprogram employment and earnings between participants in fully subsidized public sector jobs and those in fully subsidized private sector jobs. The target population was 16- to 21-year-old, out-of-school youths eligible to participate in the Youth Employment and Training Program (YETP) portion of CETA. Five YETP sites that were operating from January 1979 to April 1980 were selected for the demonstration project. Eligible youths who had completed preliminary forms were matched in pairs within each site on the basis of age, race, sex, and their scores on a reading test and then randomly assigned to a fully subsidized job slot in either the public or private sector. The subsidized jobs paid the minimum wage and the 100 percent subsidy lasted 25 weeks. A total of 2,100 participants began the program. As is typical, there was participant heterogeneity across the five sites.

Information provided for our review documents the degree of effort required at each site to develop job slots with public and private employers. This information was disaggregated by industry for private employers and by functional areas for public sector employers. In general, more effort was required to place youths in private sector subsidized jobs than in public sector subsidized employment.

Forty-four percent (921) of the participants completed 25 weeks in the program. Completion rates were higher among females, blacks, and those in public sector jobs (49 percent) than in private sector jobs (38 percent).

Immediate postprogram information was gathered at the end of the program period and at 3 and 8 months after program termination. At the 3-month follow-up only about 43 percent of the original sample could be located and interviewed (54 percent of completers and 34 percent of noncompleters). Among completers the full-time job rate was 50 percent for public sector participants compared with 64 percent for private sector participants. On the other hand the part-time job rate was 16 to 17 percent for both public sector and private sector participants. Public sector participants exhibited a higher rate of enrollment in educational or training classes (26 percent) than private sector participants (18 percent). After controlling for various individual characteristics, private sector participation continued to be associated with higher postprogram employment rates.

Results from the 8-month follow-up are derived from the approximately 35 percent of the original sample who were located and interviewed (42 percent of completers and 29 percent of noncompleters). Although multiple regressions are not available for this period, the results continue the earlier patterns among program completers: the full-time job rate was higher among private sector participants (61 percent) than among public sector participants (52 percent), and the part-time job rates were much the same for public sector (23 percent) and private sector (25 percent) participants. By the time of the 8-month follow-up, none of the private sector participants and only 4 percent of the public sector participants was in an educational or training program. At the time of the 8-month follow-up, there was virtually no difference in the employment rate for completers (80 percent) and noncompleters (78 percent), though the high attrition makes even this statement problematic.

We cannot conclude on the basis of the evaluation that there was any difference in the effects of subsidized employment in the public versus the private sector. Although private sector participation was consistently associated with higher rates of subsequent employment, adjustments for nonprogram-related characteristics considerably narrowed the private sector advantage. The evaluation of this demonstration project offers no basis on which to decide whether the effort required to secure subsidized jobs in the private sector was worth the additional cost. Although the study appeared to be very promising in terms of both the nature of the project it described and its research design, sample attrition severely limits the reliability of the reported findings. We are not confident, therefore, about drawing conclusions about the effectiveness of the project or about the issue of the desirability of subsidizing public sector compared with private sector jobs.

PROGRAMS SERVING IN-SCHOOL YOUTHS

Table 7.4 presents the characteristics of the two programs serving in-school youths. Table 7.5 summarizes the research design and results of the evaluations of those programs.

Summer Youth Employment Program

The objective of SYEP was to provide economically disadvantaged youths (14- to 21-year-olds) with summer work experience in order to "assist these youths to develop their maximum occupational potential and to obtain employment not subsidized under" CETA (P.L. 95-524, Sec. 481(b)). Program emphasis varied across sites. Some sites offered vocational training, others provided job counseling, some a combination of both. Time and resource constraints were cited as the reasons for not recording the precise program elements to which each participant was exposed. Consequently, nothing can be learned about what sorts of interventions were particularly effective or ineffective in accomplishing program objectives. Sites also differed in terms of geographic characteristics, i.e., urban, suburban, and rural, and in terms of adherence of eligibility criteria.

The evaluation we considered is of the SYEP conducted at eight sites chosen by the Department of Labor in the summer of 1979. It is based on data for approximately 2,000 youths who were ostensibly randomly chosen to participate or, if not accepted into the program on grounds other than eligibility, to be in the comparison group. Approximately 250 youths were divided between the participant and comparison groups in each site. The treatment and comparison groups differed significantly in terms of some personal characteristics both across and

TABLE 7.4 Temporary Jobs Programs for In-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Number of Sites
Summer Youth Employment Program (SYEP)/ A.L. Nellum, Associates	Summer subsidized-work experience	Some supplemental services, such as job counseling	In-school and out-of-school youths • 14-21 years old • 47% black • 13% Hispanic • 54% male	10-week summer program	8
Youth Incentive Entitlement Pilot Project (YIEPP)/ MDRC and Abt Associates	Job guarantee conditional on school enrollment and performance	Part-time work during school year, full-time during summer	In-school and out-of-school youths • 16-19 years old • economically disadvantaged • 76% black • 19% Hispanic • 14% white • 44% male	x = 15 months	17 (4 in impact study)

TABLE 7.5 Temporary Jobs Programs for In-School Youths: Research Design and Results

Youth Program	Sample Size Participant	 Control	Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
Entitlement (YIEPP)	5,156^{a}	2,354	Each pilot site matched to a comparison site; stratified random samples drawn from eligible pools in each site (program eligibles, not participants, composed the samples.)	In-program • earnings (school year) +46% to +161% • earnings (summer) +48% to +65% • decreased unemployment • increased employment-to-population ratios • no effect on school enrollment Postprogram • earnings (annual) +$545	Fall 1979^{b} total = 74% black youths = 85% Fall 1980 total = 73% black youths = 84% Fall 1981 total = 72% black youths = 83%	Due to site implementation problems and other concerns the final analysis sample consisted of black youths
Summer Youth Employment Program (SYEP)	1,000 (125/site)	1,000 (125/site)	Random sample of SYEP participants; control group composed of eligibles rejected for SYEP on basis other than eligibility	In-program effect • increased employment 100% vs. 20% Postprogram effects • increased part-time employment 25% vs. 19%	3 months postprogram participants = 74% controls = 62%	In-program effects estimated on sample of 70; poor design, high attrition, and questionable comparability of control groups weaken credibility of results.

[a] Refers to all survey respondents in pilot sites where program operated, whether they participated or not.
[b] Refers to total response rate, not necessarily the analysis sample.

BEST COPY AVAILABLE

within sites: participants were older, less likely to be black, and more likely to have previously participated in CETA programs than comparison group members.

A specially designed time-use study of subsamples of participants and nonparticipants indicated that participants' employment during the program was considerably greater than that of nonparticipants (100 percent compared with 20 percent). Unfortunately, sample sizes in the time-use study were quite small (68 participants and 65 nonparticipants) and, therefore, the results are probably not very reliable (A.L. Nellum and Associates, 1980).

Sample data were collected at the beginning and end of SYEP and at 3 months postprogram. A program completion survey instrument was administered to participants at the end of the program, but no survey was administered to the comparison group at the corresponding point of time. The 3-month follow-up survey was administered to both the treatment and comparison groups. The postprogram analysis sample was composed of approximately 800 participants and 700 nonparticipants, which indicates that sample attrition was greater among nonparticipants. Attrition was not uniform across sites, however. The New York site apparently had the worst experience--attrition among nonparticipants was higher than 70 percent. Cluster analysis was used within each site to identify comparable subsets of experimentals and controls. This procedure reduced the sample size by one-third to about 600 individuals--14 cluster groups emerged from the analysis. Because of the degree of subjective data transformation present, the results of the cluster analysis are at best suggestive and at worst statistical artifacts.

A stepwise regression analysis of the determinants of hours spent in the program indicated that older youths, those with previous CETA experience, those with higher reading scores, and those with less education tended to spend more hours in the program. Race and sex as well as Standard Assessment System measures had no significant effects on program hours per participant.

At the pretest there were no significant differences between participants and controls in plans to return to school. At the time of the follow-up, 3 percent more of the participants than the controls were in school. Although this difference turns out to be statistically significant, it is of negligible magnitude. The overall imputed favorable effect of SYEP on school attendance varied by cluster. SYEP appeared to be particularly successful in this regard for nondisadvantaged 17-year-old black males, and particularly unsuccessful for 15- to 16-year-old disadvantaged white males.

Although the general emphasis of SYEP was to encourage continued enrollment in school rather than to prepare participants for immediate entry into full-time employment upon program completion, the information available did permit an examination of the immediate labor market effects of SYEP participation. Overall, at the follow-up there was no significant difference between participants and controls in the rate of full-time employment, but there was a relatively large and statistically significant difference in part-time employment between participants (25 percent) and controls (19 percent). This result is consistent with

SYEP's goal of encouraging youths to return to school. The data indicate that the program was particularly successful in raising the part-time employment rate of severely disadvantaged 16-year-old black males during the subsequent school year and particularly unsuccessful in bringing about part-time employment for severely disadvantaged 15-year-old females.

Overall, the program seemed to have no significant effect on the likelihood of contact with the criminal justice system. Also, there is no evidence of program effects on attitudes toward such contact. The results did indicate mutually negative attitudes by participants and program personnel toward each other.

It is not legitimate to treat the evaluation results as if they were produced by a random experimental/control group design. The manner in which participants and nonparticipants were chosen varied across sites. Also, the evaluation report does not explain why the youths who were eligible for SYEP, who constituted the comparison group, were not accepted for participation in SYEP. Although the study suggests program participants gained in employment during the program and in part-time employment after the program, the evaluation design does not allow reliable inferences to be drawn about the effectiveness of the SYEP.

As with other public employment and training programs in the 1970s, the question of displacement received some attention with regard to SYEP. The number of jobs provided in a public employment program may not be the net number of jobs created as a result of the program because some of the jobs would have existed even if there had been no special jobs program and because the participants who have jobs may displace others who would have had the jobs had the program not existed. To the extent that displacement occurs, it is argued, the usual estimates of the social benefits of the program may be overestimates.

The determination of whether displacement occurs for employment and training programs and, if so, to what degree and in what circumstances, is quite complex at both a practical and a theoretical level. It should be noted that while theory suggests that there may be displacement leading to overestimates of benefits as conventionally measured, there is also a theoretical possibility of replacement, if program participants are moved from a labor surplus market to a labor shortage market, in which case conventional methods would overestimate costs and, thereby, underestimate the net social benefits of the program [see, for example, Johnson (1979) and Kemper (1980) for discussion of this issue]. While estimating the degree of displacement is particularly relevant in the context of estimating the net social benefits and costs of a given program, society may still ask what proportion of program output is over and above what would have existed in the absence of the program.

We reviewed two attempts to estimate displacement in the Summer Youth Employment Program; one (Zimmerman, 1980) relied on data collected from personal interviews with program operators, and one (Crane and Ellwood, 1984) was based on aggregate data relating state-level employment to enrollment in SYEP and other variables. The study by

Zimmerman is based to a considerable degree on supervisors' judgments about what projects would have been undertaken in the absence of the program in the eight sites. It concludes that "in 30 percent of the cases the output produced by SYEP project participants would have been produced at the same scale by alternative suppliers in the absence of the project" (Zimmerman, 1980:77).

The study by Crane and Ellwood takes an entirely different approach. The authors used unpublished data from the Current Population Survey for the 12 largest states for 1972-1978, for the months of April, July, and October, in order to measure employment by race and age group, and unpublished program data for SYEP placements by race and age for the same states over the same time period. The analysis relates employment-to-population rates for nonwhite 16- to 19-year-olds by state to the number of SYEP jobs per civilian nonwhite 16- to 19-year-olds for the state, using various other employment and school measures to control for what employment would have been in the absence of SYEP.

In such a regression, the coefficient of the SYEP placement variable provides an estimate of how much each SYEP placement increased the employment rate for nonwhites aged 16-19 across the 12 states during that time period. Theoretically, if the SYEP job caused total displacement, the coefficient of the SYEP variable would be approximately zero; if there were no displacement the coefficient would be close to 1. The authors conclude (Crane and Ellwood, 1984:23): "Regardless of the specification, estimated supplementation effects of SYEP seemed to fall between .5 an .75. Thus our best estimates is that for each SYEP job provided to nonwhite youths, one-third of a job is lost in the private sector for this group." Despite their assertion, only one of the four equations yields an estimate that is significantly different from both 1.0 and zero.

Because of reservations we have about the precision of the estimates and their statistical significance, we are not inclined to accept the estimates of displacement derived from this study. Overall, we do not believe that either the Zimmerman or Crane and Ellwood study provide reliable estimates of the magnitude of displacement in the Summer Youth Employment Program.

Youth Incentive Entitlement Pilot Projects

The Youth Incentive Entitlement Pilot Projects, which was mandated under YEDPA, was the largest YEDPA demonstration program. It cost approximately $240 million--$224 million for stipends and local program operations and $16 million for monitoring and research (Diaz et al., 1982:150)--and lasted 2-1/2 years (early spring 1978-August 1980) with an additional phase-out period of a year (fall 1980-summer 1981). Low-income youths aged 16-19 who had not yet graduated from high school constituted the eligible target population for the program. The key innovation of the program was that all eligible youths who lived in the target area were entitled to a job if they met enrollment conditions. Eligible youths were guaranteed minimum-wage jobs, part-time during the school year and full-time during the summer months.

To continue their participation in the program, participants were required to be enrolled in school or in an approved alternative educational program and to be making satisfactory progress toward a high school diploma. The short-run goals of the program were to reduce school dropout rates, raise high school graduation rates, provide work experience, and provide income during the program participation phase. The longer-term goal was to improve life-cycle labor market outcomes as a result of staying in school and receiving work experience (Farkas et al., 1984).

In all there were 17 demonstration projects across the country, and more than 70,000 youths participated. As implemented, the program had four major characteristics:

1. the average 15- to 16-year-old was enrolled in the program for 15 months (13.4 in the full program plus 1.6 in the transition year);
2. 71 percent of the work experience jobs were in the public sector;
3. beyond provision of the job itself, very few services and little training was provided: two-thirds of the youths in the program received orientation, one-fourth were tested, and one-half received employment counseling;
4. the enrollment requirement was enforced but the school attendance and performance requirements were generally not enforced.

YIEPP was not a skills training, job search, or behavior modification program. Thus, any effects observed are due to the work experience and school enrollment aspects of the program. In effect, the youths were provided with jobs and then left on their own to benefit or not.

The entitlement program was designed to saturate an area with jobs. Consequently, the presence of the program could have an effect on the employment of eligible youths even if they did not participate in the program since the total number of jobs available in the local area would have increased. To account for this, an innovative approach was taken in designing the evaluation--use of matched sites.

Four of the large-scale sites were selected as pilot sites for evaluation purposes. Four sites that did not have the entitlement program were selected as comparison sites. Cincinnati, a program site, was matched with Louisville; Baltimore with Cleveland; rural Mississippi counties with other rural Mississippi counties; and Denver with Phoenix. The evaluation technique was to estimate regressions on outcomes (e.g., employment); the independent variables were individual characteristics (to control for factors not accounted for by the match) and a dummy variable indicating whether the person was in a program site; the coefficient on the dummy variable is the program effect. Clearly, in using this approach the quality of the match becomes critical.

The evaluation was also designed to include all eligible youths, both participants and nonparticipants, in the pilot-site study group. This evaluation strategy can counter the selectivity bias that plagues evaluations based on nonrandom selection of participants and controls because those choosing not to participate can differ in significant ways from those choosing to participate. This method also yields information on what the program participation rate might be given a permanent, ongoing program. Stratified random samples of eligible youths from the pilot sites and youths from the comparison sites who would have been eligible had YIEPP operated in their areas were selected as the interview sample for the evaluation.

Youths who were aged 15-16 at the start of the program constituted the study group for the final report so the steady state effects of a permanent program for 16- to 19-year-olds could be determined. This group was also selected because it was believed that older youths had already made career decisions prior to being aware of the program and that this would contaminate pure program effects. In addition, the program participation rates of older youths were lower than those for the younger group, e.g., through summer 1980 cumulative participation rates were 66 percent among 15- to 16-year olds and 46 percent among 17- to 20-year olds.

The sample for the final analysis was limited to blacks aged 15-16 at the time of program enrollment because they constituted the overwhelming majority of participants and because most Hispanic youths in the final evaluation sample were residents of Denver, a site that had had substantial implementation problems. In addition, white youths in the sample were considered too small in number and too heavily concentrated in the Cincinnati/Louisville pair (where a school busing controversy led to substantial changes in white school attendance) to provide reliable separate estimates. The sample of black youths numbered about 1,400 (excluding Denver/Phoenix); about 40 percent were from Baltimore/Cleveland and 30 percent each from Cincinnati/Louisville and rural Mississippi.

Because other large YEDPA programs were operating in the comparison sites, the test was not one of the entitlement program compared with nothing. While the evaluation provides no way of judging how significant a factor this characteristic is, as in other evaluations it would probably lead to an underestimate of program effects since youths in the matched comparison sites were able to participate in other employment and training programs.

As noted above, the program was run as a full-fledged entitlement between spring 1978 and August 1980. During the transition period between August 1980 and August 1981, the program operated at a reduced level with a limited number of openings. The true postprogram follow-up period, as defined for purposes of the evaluation, was the postoperation period during the fall semester of 1981.

The follow-up period is troublesome in several regards. First, it is not a long period in which to observe postprogram effects, and it raises serious concerns about the extent to which effects that are observed may persist over time. Second, the final interview covered less than 2 months of the postprogram (i.e., postoperation) period for 62 percent of the sample. While most youths eligible for the program did not receive entitlement jobs during the transition period, the analysis design depends on defining the postoperation period as the postprogram period, since in theory the employment of eligible youths might be affected by the availability of an entitlement job. The evaluation design does not permit examination of changes in program effects over time because time since leaving the program cannot be a variable in this design.

There are statistically significant in-program and postprogram effects on weekly earnings, largely attributable to enhanced employment rates, but also due in a modest way to small but statistically significant increases in hours worked and wage rates received (in the postprogram period). In-program earnings effects during the school year were estimated to range between 46 and 161 percent higher than weekly earnings in the absence of the program. Comparable earnings effects during the summer periods vary between 48 and 65 percent.

During operation, the entitlement program significantly lowered unemployment rates and raised employment and labor force participation rates for young blacks as well as for all youths. The magnitude of the effect was sufficient to eliminate substantially the employment and unemployment differentials between black and white youths eligible for the program. Thus, employment-to-population rates for blacks increased from 21.1 to 41.3 percent, and those of whites increased from 31.2 to 37.4 percent during the program (Farkas et al., 1982). Unemployment rates decreased during the program, from 72.1 to 51.7 percent among black eligibles and from 61.1 to 54.8 percent among white eligibles.

An important finding of the YIEPP evaluation is that approximately two-thirds of the youths eligible for the program did participate at some time. This finding means, in part, that youths are willing to work at the minimum wage but that in the absence of a program like YIEPP employers are unwilling to hire as many (at the minimum wage) who wish to work. It may also mean, in part, that in the absence of such a program in-school youths are not as likely to be in the labor force. YIEPP demonstrated that a system can be found to employ significant numbers of disadvantaged youths.

YIEPP jobs were largely in the public sector; private sector involvement increased over time, but the participation rate of private business was generally low. The percentage of all youth job hours spent working for private work sponsors increased from 14 percent in September 1978 to 23 percent in June 1980.

Although not empirically tested under entitlement, the effect of varying subsidy rates on private employers' willingness to participate was estimated in Baltimore and Detroit using employers' responses to hypothetical questions: "Would you be willing to act as a work sponsor at a 50 percent subsidy, a 75 percent subsidy, etc."? No comparison was made between expressed willingness to participate and actual behavior (Ball et al., 1981). Only 5 percent of businesses said they would participate if offered a 50 percent subsidy; 10 percent said yes with a 75 percent subsidy. Even at a 100 percent subsidy, only 18 percent of private employers surveyed said that they would participate. While the elasticity of the employer participation rate with respect to changes in the subsidy rate appears high, i.e., a doubling of the subsidy rate more than doubles the indicated participation rate, this was not a true experimental test of participation since there were no observations of actual behavior.

The overall effects of YIEPP on secondary school enrollment and graduation were generally inconsequential. Virtually all of the estimated schooling effects are statistically insignificant. However, for black females in 1981, there was a sizable, statistically significant reduction in college enrollment; otherwise, the overall college enrollment effects are statistically insignificant, with some variation across sites. This particular program effect is troubling and deserves further scrutiny.

In the postprogram follow-up semester, program earnings effects were estimated to be 39 percent above weekly earnings in the absence of the program. These figures took the sites as the unit of observation and are based on average earnings increases for all youths in the site regardless of participation. If one assumes that the observed effects persist for a year, there would be an estimated increase of $545 in annual earnings for eligibles.

During the postprogram period in the fall of 1981, labor force participation rates of the full youth cohort were higher than those of the comparison group, but unemployment rates were not significantly different. Among young black eligibles, unemployment and labor force participation rates were not significantly different from those of the comparison group.

Because of the scale of the entitlement effort and its potential as a model for future programs serving a substantial portion of the youth population, we devoted considerable effort to our review of this evaluation. We concluded that the YIEPP evaluation was a sound one and that meticulous attention was paid to the problems inherent in the quasi-experimental (matched sites) design used in the evaluation. The drifting apart of matched pairs of pilot and comparison sites over time, i.e., the Baltimore/Cleveland and Cincinnati/Louisville pairs, was recognized. The potential bias induced by attrition was systematically investigated through a special attrition sample and found not to change the essential conclusions of the study.

Although not enough information is available to determine the long-term effects of YIEPP, the finding that there are noteworthy positive in-program effects on the employment rates of black and white youths is convincing. Correction of program effects for individual characteristics using regression analysis does not change the results. Unfortunately, it is not possible to be as confident about other in-program effects or about effects generally for Hispanic or white youths because problems with the Denver/Phoenix and Cincinnati/Louisville pairs severely reduced the number of Hispanics and whites in the study.

Related to the discussion of the magnitude of the employment effects of the entitlement program is the issue of displacement or net job creation. The report on in-program effects (Farkas et al., 1982) estimates that one new job was created for each 1.4 entitlement jobs funded in the public sector and for each 2.2 jobs funded in the private sector. The report also indicates that these assessments may be conservative in the sense that they only measure the extent of displacement among program-eligible youths and do not include a measure of displacement of ineligible people (e.g., nondisadvantaged or out-of-school youths or adults) who might otherwise have been hired.

If these estimates are accurate, approximately 40 percent of the measured employment change resulted from shifting people who would have been employed in the absence of the program. Such a finding would have important implications for the net effects of the program in terms of job creation, as well as obvious cost implications.

We discussed earlier the complexities involved in estimating displacement in connection with our review of the Summer Youth Employment Program above, and many of those concerns apply here as well. Because samples of youths were drawn both in the entitlement pilot sites and in the matched comparison sites, one could in theory capture one major element of the degree of displacement by using the comparison site figures to estimate what the employment of entitlement-age youths would have been had there been no entitlement project.

This is essentially what Farkas et al. (1983) did by comparing the employment rates in the pilot sites with those in the comparison sites during the period of program operation for similar age-race groups and then dividing the differences in employment by the number of entitlement jobs in the pilot sites to measure net job creation displacement. Their estimate of the magnitude of net job creation is about 70 percent, implying displacement of around 30 percent. At the same time, control sites probably had substantial numbers of youths in YEDPA and other federal employment and training programs, and so the meaning of YIEPP displacement, even if accurately measured, is not clear.

Another study of displacement in the entitlement program (Gould et al., 1982) surveyed a sample of private firms, both those that had actually provided jobs for entitlement participants and those that had not. Information was gathered on the levels of output and employment in these firms before, during, and after the period of the entitlement program. Using the data from the period before entitlement and for those firms not directly hiring participants, the authors developed econometric models that provided estimates of what employment in the firms would have been had there not been an entitlement project. (The analysis was complicated by the fact that even in the preprogram period many of the employers had other subsidized workers, presumably from CETA programs, in their firms.) The authors estimate that about 40 percent of the jobs created through entitlement resulted in displacement.

While this was an imaginative and interesting effort, several features of it could lead one to question the precise magnitude of the estimate of displacement. First, the response rate to the initial survey was rather low (54 percent). Second, we have some doubts about the ability of the econometric model based on limited preprogram data to estimate what employment would have been in the absence of the program when operating with a small sample of highly individualized firms in particular localities. Third, and perhaps most important, this method provides no indication of what happened to those workers and resources that were displaced from these particular firms. Did they find alternative employment or remain unemployed? Since there is no market-wide measure of the degree of shortage, this important element in the determination of the final degree of displacement is missing.

We believe that the technical problems with each of the studies estimating displacement in the entitlement program are sufficient to prevent confidence in accepting any given point estimate of its magnitude.

There remain several other concerns about the entitlement evaluation's findings. The in-program and postprogram findings vary considerably by site. As noted above, we are convinced that the positive in-program effects are sound, but we are not so convinced with regard to postprogram effects. The postprogram results for weekly earnings show a negative effect for Baltimore (relative to Cleveland), while Cincinnati had an equal absolute value positive effect (relative to Louisville) with a smaller sample size than Baltimore, and the effect for rural Mississippi was positive. Hence, the finding of an overall positive postprogram effect is influenced considerably by the results for Mississippi.

In other words, if the analysis is limited to urban sites, the average effect is zero or slightly negative. The researchers explain the negative Baltimore effect by noting an unexpectedly healthy Cleveland economy that might diminish the quality of the match over time. However, Baltimore was described as the best run of the programs. Because of across-site disparities in results and because it does not seem plausible to average rural and urban sites, the entitlement program results are most appropriately viewed as separate case studies. It is therefore difficult to see how to extract results on postprogram effects that are generalizable to the nation as a whole.

The estimated postprogram effects of the entitlement program vary considerably across demographic subgroups as well as sites. The postprogram earnings effects for young black males are (nominally) twice those for young black females, $13.66 and $6.13 respectively, but the estimates for females are not significantly different from zero. The postprogram effect on weekly earnings for older (17- to 20-year-old) black youths was $4.14, and the effect for 15- to 16-year-old whites and Hispanics was one-sixth the size of the effect for comparable blacks, approximately $1.53 per week. Both effects were statistically significant.[*]

---

[*] This result is based on the weighted averages of estimated weekly earnings effects. The weekly earnings effect of $9.11 for the young black cohort (Denver/Phoenix included) declines to $7.45 for the full young cohort, i.e., when Hispanic and white youths are added (Farkas et al., 1984). Using the sample weights, we computed the estimated earnings effect for white and Hispanic youths (combined) as

$$9.11\, n_1 + x\, n_2 = \$7.45,$$

Besides weekly earnings effects, other outcomes also differed considerably by sex. The school enrollment/graduation outcomes for females did not appear to follow any pattern. Overall the program appears to have reduced college enrollment for females in two of the three sites. There is no readily apparent explanation for this result, since high school graduation rates are not significantly lower in those sites. Between the first interview and the last, the proportion of young black females with one or more children increased from 6 to 48 percent in one site and varied substantially across the sites. The estimated employment-related effects for young black women relative to men are probably influenced to some degree by the high rates of childbearing that characterized young black females in the sample.

SUMMARY

The evaluations of temporary jobs programs consistently found evidence that in-program earnings and employment were higher as a result of the program. The findings of the Summer Youth Employment Program evaluation tentatively suggested in-program gains in employment, but we have only limited confidence in the evaluation. The Supported Work and entitlement evaluations provided the strongest evidence on this issue.

In the case of Supported Work, a program serving severely disadvantaged dropout youths, monthly in-program earnings of participants were $289 above those earned by the control group during the initial 3 months after enrollment in the program. Youths eligible for the entitlement program earned, on average, up to $9 more per week during the school year than the comparison group and up to $10 more per week during the summer. Earnings of the black youth cohort were as much as $12-$13 higher than the comparison group's during both the school year and the summer months (Farkas et al., 1982).

For participants in Supported Work, 97 percent were employed during the first 3 months after enrollment, compared with 29 percent of nonparticipants. Employment rates of young blacks in the entitlement program were up to 26 percentage points (235 percent) higher during the program than those of youths in the comparison sites.

From this evidence we can generally conclude that temporary jobs programs effectively increased employment for participants and, hence, served an income transfer goal that has been an underlying rationale in many such programs. Without regard to the merits of this particular

---

where, n_1 equals black youth cohort weight, n_2 equals white and Hispanic youth cohort weight, and X equals weekly earnings effect for white and Hispanic youths:

$9.11 (.781) + X (.219) = $7.45
X (.219) = $7.45 - $7.115
X (.219) = $0.335
X = $1.53

program goal, the extent to which the estimated employment effects of a jobs program translate into an increase in the total number of jobs available, an increase in the number of employed persons, or a decrease in the number of unemployed persons may vary.

While there is considerable disagreement about the proper way to estimate displacement in job creation programs, and a corresponding distrust of any given point estimate of its magnitude, most researchers and policy makers acknowledge the displacement problem.[5] From society's point of view the nature of displacement may be as important as its level. Thus, if a program displaces people who are more advantaged than participants, and who could easily find alternative employment, it may be considered less a problem than if the program displaces individuals who are equally disadvantaged (Masters, 1981).

The estimated in-program effects on labor market outcomes other than employment rates and earnings were variable among the programs and for different target groups within most of the programs. The entitlement program significantly lowered unemployment rates and raised labor force participation rates for all eligibles in the young cohort. Among Supported Work participants, gains in hours worked tended to be larger among those who were younger, females, white, and more educated. Neither the Public Versus Private Sector Jobs Demonstration Project nor VICI provided much information on in-program effects.

Because the research design of the entitlement program required the ability to measure postprogram effects in an entire youth labor market (not only for participants), the postprogram period was defined as the time following the close of the program. Thus, the postprogram period for the entitlement program was the fall semester of 1981, and 62 percent of the black youth sample was interviewed within 2 months of the time the program terminated.

The entitlement program increased postprogram earnings of eligible black youths by the equivalent of $545 per year (assuming measured postprogram gains persisted) and raised postprogram hours worked for employed black youths by 6 percent (from 32 to 34 hours per week). Employment rates were higher among blacks and labor force participation was higher for the full youth cohort. Neither labor force participation rates nor unemployment rates of the young black cohort of entitlement eligibles were significantly different from those of the comparison group in the short postprogram period (Farkas et al., 1982).

---

[5] For example, the YEDPA authorizing legislation and the 1978 CETA amendments required the Secretary of Labor to make periodic reports on various aspects of the entitlement program, including displacement. Reports were to include findings with respect to enrollment; costs; the degree to which out-of-school youths returned to school or others remained in school; the percentage of eligible youths participating; the kinds of jobs provided and a description of the employers--public and private; the degree to which on-the-job or apprenticeship training was offered; the estimated cost of extending the program to all areas; the effect of the program in reducing youth unemployment in the pilot areas; and the effect of program job opportunities on other opportunities for youths in the area [P.L. 95-93 (YEDPA), Sec. 329; Report No. 95-1765 (CETA Amendments of 1978), Sec. 420].

There is limited evidence on the long-term effects of participation in temporary jobs programs. The Supported Work program clearly indicated no such effect for the severely disadvantaged dropouts it served. The evidence from the other studies is less clear, for a variety of methodological reasons. Most of the other studies analyzed a maximum of 8 months of postprogram experience, some as little as 3 months. The VICI evaluation was designed to measure effects 8 months after program participation, but was generally unconvincing.

The studies of temporary jobs programs that we examined were not very encouraging about the goal of raising school attendance rates, lowering drug abuse, or reducing negative encounters with the criminal justice system. With respect to school retention, the summer jobs program evaluation offered questionable evidence in support of increased school participation. The entitlement program had no effect on either school retention of youths already in school or school completion by dropouts who had returned.

8
Effectiveness of Job Placement Programs

The final type of program reviewed by the committee attempted to aid youths directly in finding employment. The programs usually offered some services in addition to job referral: workshops on preparing resumes, instruction in appropriate behavior during a job interview, and support groups for job seekers supplemented the more traditional job referral activities. While these programs offered some services that overlapped those we have previously termed labor market preparation, they are distinguished by their very concrete focus on securing employment, within a specified time period, for the youths in the program. In addition, wage subsidies (sometimes to employers and sometimes to the youths themselves) were occasionally used as a transitional device to get youths situated in suitable jobs; the hope was that the job would continue after the subsidy ended.

Overall, the evaluation reports in the job placement category were, with one exception, generally weaker in methodological rigor than those addressing other program goals. As a consequence, conclusions about the effectiveness of job placement efforts are at best tentative.

PROGRAMS FOR OUT-OF-SCHOOL YOUTHS

Among the reports that passed our initial screening were those of four projects that represented job placement efforts serving out-of-school youths: 70001, Job Factory, Job Factory Voucher Program, and Job Track. Table 8.1 details the characteristics of each of these programs; Table 8.2 details the research design and results of the evaluations of the programs.

70001

70001 was a job search program for out-of-school youths aged 16-21. Enrollment was 60 percent female and 87 percent minority; the average participant was 18 years old; only 1 percent held high school degrees. The program consisted of an average of 32 hours of treatment involving job preparation workshops, job search training, and the like. Similar to other job search programs, it attempted to teach

TABLE 8.1 Job Placement Programs for Out-of-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Sites
70001/CPPV	Job search assistance	Job preparation workshops, job search assistance, and follow-up; completion of GED stressed	Out-of-school youths • 99% dropouts • 40% male • 87% minority	Average = 32 hours	In five cities, all centrally managed (sites selected on basis of their relative success)
Job Factory/ Brandeis University CEIS	Job search assistance		Out-of-school youths • 55% high school graduates • 32% dropouts • 60% minority • 55% male	83 hours over 4 weeks	Cambridge
Job Factory Voucher Program/ Brandeis University CEIS 1982	Job search assistance with and without wage subsidy at placement to encourage youths to find jobs themselves	Job search preparation and motivation; two treatments: assistance plus wage subsidy, and subsidy only	Out-of-school youths • 49% dropouts • 37% graduates • 52% minority • 62% male	104 hours over 4 weeks	Cambridge
Job Track Olympus Research	Job search assistance		Out-of-school youths • 90% minority • 72% male	2-day program	San Francisco

BEST COPY AVAILABLE

TABLE 8.2 Job Placement Programs for Out-of-School Youths: Research Design and Results

Youth Program	Sample Size Participant	 Control	Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
70001	535	440	Comparison group matched on demographic characteristics	• Initial gains in earnings +$12/week or +35% • Earnings gains decay by 24-40 months (both earning $63 per week) • GED[a] completion +19%	24-40 months post-program Total = 87%	Female participants had higher rate of child-bearing than comparisons
Job Factory	203	165	Random assignment	Increased employment • at 6 weeks 64% versus 48% • at 36 weeks both 80%	6 weeks post-program P = 64% C = 52% 36 weeks post-program P = 26% C = 20%	Severe attrition at later follow-up discredits all but first follow-up results
Job Factory Voucher Program	130[b] 161[c]	108	Random assignment to treatment and control groups	Increased employment • voucher only: 70% • voucher and job search: 58% • control: 51%	20 weeks post-enrollment Voucher only = 18% Voucher and job search = 80% Controls = 60%	
Job Track			Comparison group	Increased employment • at 6 weeks 46% versus 28% • at 12 weeks 66% versus 49%	6 and 12 weeks postprogram	Significant differences in characteristics of comparison and participant groups, plus very high attrition make results questionable

[a] General Equivalency Diploma.
[b] Voucher only.
[c] Voucher and job search.

BEST COPY AVAILABLE

youths what employers expected, to teach them job search skills, and to motivate them. Unlike some other programs, the evaluation report indicates that the staff did some (unspecified) amount of follow-up with the youths after they had found a job.

The research design by the Corporation for Public/Private Ventures (CPPV) is a matched comparison of youths in five program cities; all of the evaluations were operated by the central organization. The sample size was approximately 500 participants (all program entrants in the five cities between January 1979 and April 1980) and 400 comparisons drawn from a variety of sources, including Employment Service registers, school dropout lists, and other sources. The report notes that an earlier evaluation with a shorter follow-up period found significant initial gains followed by equally large decay effects for a similar job search program (Jobs For Youth), while the initial gains for 70001 did not appear to decay. An important question was whether this effect was an artifact of the sampling procedure (program termination dates are uncertain and the follow-up may work to keep youths in jobs) or whether the effects persisted.

The placement rate was 50 percent, and the cost per enrollee (in 1979) was $1,351. The initial difference in earnings between participants and comparisons ($12 per week more or 35 percent higher) is statistically significant, but by 24 to 40 months after starting the program there is no significant difference between the earnings of participants and comparisons. The evidence thus suggests that the program may provide a brokering or screening function in helping youths to obtain job placements and that this effect decays with time as nonparticipants' earnings eventually reach parity. The decay effect persists in multiple regression analyses controlling for various individual characteristics and does not change for various age, sex, or race groups.

With respect to job quality, at the 24- to 40-month follow-up, 25 percent of the male participants and 5 percent of the female participants held skilled jobs. For the comparison group, the figures were 21 percent and 19 percent. The authors attribute the female pattern to a higher rate of childbearing by the participants, but even when the analysis is limited to women with no children, the comparison group does as well as the participants.

The program stressed completion of the General Equivalency Diploma (GED), and there appears to be a significant long-term impact: 31 percent of the participants received a GED compared with 12 percent of the comparison group. However, only 3 percent of the participants received a regular high school degree compared with 9 percent of the comparison group. Hence, the comparative results for educational attainment are slightly lower than the GED results imply, but still favor the participants by a statistically significant amount. There are no other noticeable effects with respect to training, military service, crime reduction, or the like.

The report cautions that the evaluation sites were known to perform better in terms of job placement than sites not chosen. Thus, the sample may not be representative of all 70001 programs operating during the 1979-1980 period. The response rate at 24-40 weeks postprogram was

87 percent, and there appears to be no substantial attrition bias (efforts were made to control for attrition bias).

Participants and comparisons appeared to be matched closely in terms of most demographic characteristics with the exception that at entry female participants had significantly fewer dependents than comparison group females. The difference was no longer significant at the 24- to 40-month follow-up, apparently because of higher rates of childbearing among participants. Female participants were also significantly younger than nonparticipants.

Overall, we believe that the results of the evaluation of the 70001 sites studied are reliable, but the results may not be generalizable to all sites because the sample sites were known to be better than average prior to selection.

Job Factory

Brandeis University evaluated job search assistance programs that operated in Cambridge, Massachusetts, and Wilkes-Barre, Pennsylvania, from 1979 to 1980. However, because of severe implementation difficulties with the program in Wilkes-Barre, we disregarded the portion of the report dealing with that program. The Cambridge program, the Job Factory, enrolled 50 youths in each of five cycles. The first and last cycles were for graduating high school seniors and began the first week in June of 1979 and 1980, respectively. The middle cycles were for dropouts. Youths in the first cycle and one of the middle ones received stipends of $3.10 per hour while the others did not. Each cycle lasted four weeks and youths received an average of 83 hours of motivation, job search preparation, and role-playing.

The research design used random assignment. The sample size was approximately 203 participants and 165 control individuals. Data were collected on a variety of outcomes including the job finding rate, job characteristics, job-finding methods used, and results of various tests in YEDPA's Standardized Assessment System (SAS) battery.

Data from the first follow-up interview at 6 weeks postprogram indicated that, overall, participants were about one-third more likely to be employed than controls (64 percent and 48 percent). By the time of the final follow-up, at 36 weeks postprogram, the job finding rates was slightly higher for the controls (82 percent were employed compared with 79 percent of participants).

The quality of the first postprogram job did not differ a great deal between the two groups. A somewhat larger proportion of participants were employed full time (67 percent compared with 53 percent). Differences in hourly wages appeared to favor participants slightly ($3.50 compared with $3.40 per hour). Although the participants' jobs appear to be slightly better, this may be understood by the slightly larger percentage of participants in jobs that were subsidized by public funds (20 percent and 16 percent). Of the seven psychometric scale items in the SAS battery only three were statistically significant at the .05 level and none was correlated with outcomes.

The results for the seniors in the first cycle who received stipends exhibited the same time pattern as did the results for dropouts. A slightly higher percentage of the seniors held jobs over the course of the follow-up, but the differences were not great: e.g., at the final follow-up, job holding for seniors was 83.3 percent for participants and 84.2 percent for controls; for dropouts, the numbers were 73.9 percent and 78.6 percent, respectively.

Various cost calculations indicate that the average cost per participant was $989, the cost per employed youths was $1,441, and the net short-run cost per new job (i.e., jobs that would not have otherwise been found within the first 6 weeks postprogram) was $4,468.

Attrition in the analysis sample was substantial. Responses to the interview at 6 weeks postprogram were obtained from 64 percent of the participants and 52 percent of the controls; at 20 weeks postprogram response rates were 41 percent and 34 percent, respectively; by 36 weeks postprogram the response rates were 26 percent and 20 percent, respectively, with a total of 53 observations for participants and 33 for controls.

Significance tests of the differences in the mean characteristics of jobs between controls and participants were not presented in the evaluation report. Given the small sample size, it is unlikely that the reported differences are statistically significant at conventional levels, and we therefore cannot be very confident about program effects, especially after 6 weeks.

Job Factory Voucher Program

The Job Factory Voucher Program was a variation of the Job Factory model in which youths received a wage subsidy if they found employment quickly. The supplement was $1.50 an hour for the first 2 weeks of work and $1 an hour extra for weeks 3-12. Youths were recruited for each of six 4-week cycles of the program between November 1980 and December 1981 and randomly assigned to one of three treatments: Job Factory plus voucher, voucher only, or no treatment.[1]

The results show a peculiar pattern of effects. At 4 weeks postprogram the full-treatment group does better than the voucher-only group and the control (no-treatment) group. By 12 weeks the full-treatment and voucher-only groups are equal, and by 20 weeks the voucher-only group does better than the full-treatment group. Fifty-eight percent of the full-treatment group worked between the second and third follow-up compared with 70 percent of the voucher-only group and 51 percent of the control group.

---

[1] A Wilkes-Barre program that provided subsidies to employers was also evaluated, (Rivera-Casale et al., 1982) but because it experienced severe implementation problems and did not use a comparison group of youths not participating in the program, the committee decided that the results did not provide reliable evidence.

Attrition and resulting small sample sizes may account for some of the findings. Between the initial data collection and 20 weeks after enrollment, attrition among participants in the full-treatment group was 20 percent, among the voucher-only group it was 82 percent, and among the control group it was 38 percent. Final analyses are based on observations for 60 controls, 23 participants in the voucher-only group, and 128 in the full-treatment group.

A number of other methodological problems in the evaluation are cause for concern: administrative implementation difficulties, changing characteristics of the youths over the course of the program, and interaction among youths in the different treatment groups. Consequently, we are not confident in the results of the Job Factory Voucher Program evaluation.

Job Track

Job Track was a job search assistance program that offered 2 days of job search training followed by 3 days of support services to out-of-school youths who applied to local Employment Service offices. Participants were 16- to 21-year-old, out-of-school youths. The program operated from July to December 1980 in San Francisco. Olympus Research Centers was responsible for both operating the program and doing the evaluation.

Participant outcomes were compared with those of a matched comparison group of nonparticipants. The evaluation sample was originally composed of 136 comparison group members and 103 participants, but the analyses were actually based on 88 participants and 76 comparison group youths at the 6-week follow-up and 80 participants and 69 comparison group youths at the 12-week follow-up. The regression-adjusted results at 6 weeks postprogram suggest that participants were more likely than nonparticipants to be employed (46 percent compared with 28 percent). At the 12-week postprogram follow-up, the employment rates of the two groups were 66 percent and 49 percent, but the difference was not statistically significant. There were no apparent differences in job search intensity or the number of methods used. About 50 percent of the youths in the program found employment without going through a formal interview procedure.

Comparison group members differed from participants in two major respects that would suggest that comparisons were more employable: 30 percent of comparison group members compared with 18 percent of participants were independent (that is, neither family heads nor family members), and 22 percent of comparison group members and 13 percent of participants had some college training. We have limited confidence in the findings of the effects of the original Job Track program.

A modified program, Job Track II, operated for 10 weeks between March and June 1982. The new program offered a stipend of $50, extended the program to 2 weeks, and differed from the earlier version in several other respects. The Job Track II evaluation did not use a comparison group, but compared the outcomes of participants in the new program with those in the earlier one. Therefore, we did not consider the findings of the Job Track II program.

PROGRAMS FOR IN-SCHOOL YOUTHS

The committee reviewed reports on three programs that provided job placement services for in-school youths: Jobs for Delaware Graduates, Jobs for America's Graduates, and Project Best. Table 8.3 details the characteristics of each of these programs; Table 8.4 details the research design and results of the evaluations of the programs.

Jobs for Delaware Graduates

Jobs for Delaware Graduates is a school-to-work transition program for high school seniors. Begun in Delaware, it is currently being replicated throughout the country by a central organization, Jobs for America's Graduates. We reviewed two evaluations: one of the original Delaware program done by Temple University (discussed in this section) and one based on four sites done by Northeastern University (discussed in the next section).

In the Jobs for Delaware Graduates (and Jobs for America's Graduates) program, high schools first develop lists of seniors who are in the bottom of their class and who are eligible for the program. The seniors participate in as many as three rounds of interviews and then are selected to enter the program (34 percent of those interviewed were selected in the programs that Temple University examined). The program consists of job preparation workshops (e.g., resume writing and interview techniques), a support club, assistance in job finding, and follow-up after job finding by program counselors.

The Temple evaluation for 1980 Delaware graduates used comparison groups drawn from other Delaware high schools that were considered comparable but did not have the program. By 1981 too many high schools in Delaware had the program, so for the evaluation of that year Temple examined the estimated changes in program effects from 1 year to the next. This latter evaluation was of limited usefulness both because further changes may have occurred and because this methodology cannot eliminate effects of changes in the economy between the two periods. Hence our analysis focused only on the study of 1980 graduates.

The researchers conducted follow-up interviews 3 and 8 months after graduation, but the program was still in effect even after 8 months because the counselors maintained some follow-up contact. Also, given the findings from other projects concerning decay, 8 months may not be a long enough follow-up period to assess postprogram effects.

The differences in outcomes between participants and comparison group members at the time of the 3-month interview are all significant at the 1 percent level or better. The results indicate that participants were more likely to be employed full time at the time of the interview (56 percent compared with 36 percent), more likely to have held a full-time job (75 percent compared with 49 percent), and more likely to have been employed since graduation, (84 percent compared with 73 percent). The results at 8 months postprogram indicate that participants still fared significantly better than nonparticipants in terms of employment, though the difference was smaller than at 3 months

TABLE 8.3 Job Placement Programs for In-School Youths: Program Characteristics

Youth Project/ Evaluator	Program Approach	Services Provided	Target Group Characteristics	Length of Program Participation	Sites
Jobs for Delaware Graduates (JDG)/ Temple University	School-to-work transition program for noncollege-bound high school seniors	Job preparation workshops, job search assistance, and follow-up	In-school youths • high school seniors • 20-25% economically disadvantaged • 20% from families on public assistance • selected from bottom third of class (academically) • 37% minority • 44% male	61 hours average over school year	Delaware JDG sites and companion sites
Jobs for America's Graduates (JAG)/ Northeastern University	School-to-work transition program for noncollege-bound high school seniors	Job preparation workshops, job search assistance, and follow-up	In-school youths (participants and comparisons combined) • x family income = $11,000 • 71% minority • 47% male	Not specified	JAG participating sites in Arizona, Massachusetts, Missouri, and Tennessee
Project BEST (Better Employment Through Skills Training)/ Temple University	School-to-work transition program for noncollege-bound high school seniors	1 hour/day of labor market preparation, job counseling, and job placement	High school seniors, selected to participate • 100% black • 42% male	83 hours average over school year	Philadelphia inner-city high school

BEST COPY AVAILABLE

TABLE 8.4 Jobs Placement Programs for In-School Youths: Research Design and Results

Youth Program	Sample Size Participant	 Control	Control/Comparison Group Methodology	Program Effects	Follow-up Response Rate	Comments
Jobs for Delaware's Graduates (JDG)	666	182	Comparison groups drawn from comparable schools without JDG	At 3 months • employed full time +19% • employed full time since since graduation +25% At 8 months • employed FT +9% • employed FT since graduation +17% No differences in tenure, wages, or type of jobs until 8 months when participants earn $3.90/ hour (+$.38 over comparisons)	3 months and 8 months post-graduation +25% 3 months P = 76% C = 69% 8 months P = 72% C = 67%	Comparison group differed on several characteristics from participants (e.g., school status, college enrollment)
Jobs for America's Graduates (JAG)	1,106	410	Matched comparison group	• Employment (summer) 75% versus 48% • Employment (fall) 55% versus 33% • Fall hourly wage $3.82 versus $3.67 • Fall weekly earnings +$15	Within 6 months of graduation P = 94% C = 60%	Lack of adjustment for attrition and site differences make results questionable
Project BEST	202[a] 150[b]	139 130	Match comparison group from other Philadelphia schools	No measurable effect on employment	3 months[b] 85%	

[a] 1979-1980 school year.
[b] 1980-1981 school year.

postprogram (e.g., 58 percent of participants and 48 percent of nonparticipants were employed full time at the 8-month interview).[2]

The jobs held by participants and nonparticipants were similar in terms of hours per week, skill level, and tenure. However, at 3 months postprogram participant wages on the most recent job were insignificantly below those of the comparison group, but at 8 months the participants had an edge of 38 cents an hour (participants received $3.90 an hour in the late fall of 1980), and this was statistically significant at the 10 percent level. Unfortunately, this is the only instance of a statistically significant difference in the nature of jobs held and hence should be viewed cautiously.

There were no differences between the two groups in terms of the Educational Testing Service's (ETS) measures of job knowledge, work attitudes, or self-esteem. There was a significant difference in a measure of job-seeking skills at 8 months postprogram that favored participants. The job-holding gains of the participants were offset by the nominally higher but statistically insignificant postgraduation school attendance rates of the comparison group.

Participants in the Jobs for Delaware Graduates programs differed in important respects from those in other programs whose evaluations we reviewed. All were high school seniors, so no dropouts were included, and potential dropouts may have been screened out. Only 20 to 25 percent of participants were economically disadvantaged. The program involved an extensive preselection process that may lead to creaming, i.e., selection of those applicants who might be easiest to place. At the same time, the youths in these programs were not in college preparatory or vocational programs and were at the bottom of the class ranking in the general curriculum.

The sample of participants was 25 percent economically disadvantaged, 37 percent minority, and 56 percent female; 25 percent had previously had a skilled or semiskilled job, and 72 percent had previously worked in a job paying at least $3.17 an hour. Participants' scores for the SAS reading test indicated a reading level of eighth grade or higher. The comparison group had a higher percentage of minority youths (47) and a higher percentage of limited English speakers (6.3 compared with 2.6), both of which might bias the results in favor of the program, but the comparison group had a better work history (81 percent had previously worked and 48 percent had held skilled or semi-skilled jobs).

While the results were less favorable at 8 months than at 3 months, attrition may play an important role. Attrition among participants was 24 percent 3 months after graduation and 28 percent 8 months after graduation; among comparison group youths attrition was 31 percent at 3 months and 33 percent at 8 months after graduation. There is no indication that attempts were made to adjust for possible attrition bias. Thus, differences in attrition rates may contribute to the measured differences in postgraduation experiences between participants and nonparticipants. Another potentially troubling issue on which the report is silent is the treatment of dropouts. Since the participant sample includes only graduates, the appropriate comparison would be nonparticipant graduates. Inclusion of nongraduates in the comparison sample would probably tend to overstate program effects on employment.

---

[2] The summary of the published report (Eleey and Leone, 1982) states that some key findings are insignificant while the body of the text states that they are significant (Eleey and Leone, 1982); these inconsistencies were corrected in an errata sheet from the authors that says the findings are statistically significant.

The report presents what we found to be convincing evidence of short-term, i.e., 3-month, postprogram effects in increasing employment. The 8-month findings indicate a smaller effect and are less convincing. Because of sample attrition it is possible that what appears as a decay effect is due at least in part to attrition.

Jobs for America's Graduates

The Northeastern University study of Jobs for America's Graduates was sponsored by Jobs for America's Graduates and was a 6-month follow-up of spring 1982 graduates in four states: Arizona, Massachusetts, Missouri, and Tennessee. The study used a matched comparison group methodology with a sample of 1,106 participants and 410 comparisons. The total sample was 53 percent female, average family income was $11,000, and 95 percent of the sample were high school graduates. Data on participants were collected by program counselors during the 9 months of postgraduation follow-up visits.

The results indicate that during fall 1982 participants fared significantly better than nonparticipants with respect to the probability of being employed, weeks employed, hourly wage rates, and weekly earnings. No analysis of intersite differences is provided, but based on other studies there is reason to believe that there would be substantial variation across sites.

Several considerations make us skeptical of accepting the results of the evaluation of Jobs for America's Graduates. First, the attrition rate at the 6-month follow-up was 6 percent for participants but 40 percent for the comparison group; no adjustments were made for possible attrition bias, and no data are presented that allow examination of the effect of attrition on the match between participants and nonparticipants. Even if the results reported were robust, studies of similar programs indicate that a 6-month follow-up period is too short to allow valid inferences to be drawn about long-term program effects, which are susceptible to decay. Finally, the extensive preselection procedures used may have produced a participant group that is not generally representative of non-college-bound high school seniors.

Project BEST

The Better Employment through Skills Training Project (Project BEST) involved 1 hour per day of labor-market oriented classroom training in conjunction with counseling and "job shadowing" for disadvantaged minority high school seniors in an inner-city Philadelphia high school. The Temple University study of the project is of interest because it did not find employment gains for participants relative to the comparison group at 3 and 11 months postprogram.

The program operated during the 1979-1980 and 1980-1981 academic years and served about 350 students. While the study suggests that the project's job placement strategy was ineffective, its findings cannot be taken as conclusive, inasmuch as the comparison group was not randomly selected (they were students at other Philadelphia high schools) and program participants were self-selected. While the evaluators acknowledged the selectivity bias inherent in this approach, they made no explicit correction for it.

SUMMARY

While most of the evaluations of programs offering job placement services to youths found the programs to be effective in securing employment for participants, most of the evaluations had serious methodological flaws and therefore do not provide reliable evidence on the question of effectiveness. Consequently, we do not believe one can draw strong inferences about program effects on the basis of these studies.

Of all the evaluations of YEDPA job placement programs serving out-of-school youths, the CPPV study of 70001 comes closest to providing trustworthy evidence of program effectiveness. The program reported a 50 percent success rate in placing participants in jobs, and program costs averaged $1,351 per enrollee. For the demographic characteristics reported in the evaluation, there is a reasonably close match between the comparison and the participant groups. The only major difference between groups was that female participants in the 70001 program had fewer dependents than the comparison group.

Even for this study, however, we have questions. Besides the concerns generated by the use of a constructed comparison (rather than a randomly assigned control group), the selection of sites in the 70001 evaluation is a cause for concern. The chosen sites were known to be better performers in terms of job placement. The resultant evaluation data may thus provide an upper-bound estimate of what the 70001 programs achieved.

While the design of the 70001 evaluation is somewhat problematic, the execution and reporting of the research were rigorous (see CPPV, 1983). In contrast to most of the studies we reviewed, the CPPV evaluators and their subcontractor, Institute for Survey Research, Temple University, obtained an 86 percent response rate at 24+ months postprogram. Moreover, the report is appropriately candid about the design problems of the study, and it presents detailed calculations and discussions of the potential effects of selection and attrition bias.

Nine months after completion of 70001, participating youths earned an average of $12 per week more than the comparison group. This difference in earnings arose from increased employment rather than differences in wage rates: 41 percent of 70001 youths and 29 percent of the comparison group were employed. A subsequent follow-up conducted 24-40 months after participation in 70001 found that this program effect had decayed entirely: employment rates were 38 percent for 70001 participants and 42 percent for the comparison group.

On the basis of the 70001 study and other evaluations, there is evidence that the effects of job placement programs decay over time, so that after 24 months there is no discernible difference between participants and nonparticipants on most outcomes.

Two highly regarded programs for in-school youths, Jobs for Delaware Graduates and Jobs for America's Graduates, served a segment of the youth population that was least in need of assistance in locating suitable employment--high school graduates, 75 percent of whom came from families that were not economically disadvantaged. While we found the evidence of short-term program effects convincing, any inference that results from such a program could be realized with economically disadvantaged populations or with school dropouts is highly speculative.

9

Evidence of Program Effectiveness from National Data Bases

In addition to the program-specific evaluations of YEDPA effectiveness that were reviewed in Chapters 5 through 8, there are several evaluations that attempted to use large, representative national samples to derive estimates of the impact of all federally funded employment and training programs. The most prominently used data bases in these studies were the Continuous Longitudinal Manpower Survey (CLMS) and a special youth sample of the National Longitudinal Survey (NLS). Both of these data bases involve relatively large samples--more than 60,000 in the CLMS and more than 12,000 in the NLS--that are drawn in a manner designed to permit generalizations, for CLMS, to the universe of participants in CETA programs, and, for NLS, to all American youths. There was also a YEDPA attempt to collect data on the progress of its participants and activities. While the major charge of our committee was to focus on the YEDPA knowledge development activities, we also reviewed the findings from studies using these other data bases, and we evaluated the quality of YEDPA's Standardized Assessment System.

The results of our review of this research are presented in detail in Appendices A and D. In this chapter we summarize our conclusions regarding this evidence.

THE CLMS AND NLS DATA BASES

The studies based on the CLMS and the NLS use data gathered in a different manner and have a somewhat different (and wider) focus than the program-specific evaluations, and so provide an important supplementary perspective on the substance and problems of the individual YEDPA evaluations we reviewed. Moreover, these studies use data derived from samples with high sample-coverage rates and low sample attrition, and consequently they can provide a more adequate evidentiary basis (at least in respect to sampling mechanics) than many of the individual program studies we reviewed.

Both the CLMS and the NLS are full probability samples whose sampling designs appear to have been well executed. Sample coverage appears high, and the available documentation shows considerable attention to important methodological details, such as adequacy of sampling frame, careful screening of respondents to ensure that they are within the universe being sampled, extensive follow-up to ensure a high response rate, and so forth.

For both the NLS and CLMS, comparison groups must be constructed. The basic goal in selecting a comparison group is to find a sample of individuals who closely resemble the participants in employment and training programs. Lacking an experimental design, in which individuals are randomly assigned to participant and control groups, a comparison group strategy is a next-best approach. (The problems inherent in this strategy are discussed below.)

There are, nonetheless, important limitations to these data bases. First, they are not targeted on specific programs, and so the estimates of aggregate program effects may lump together the effects of effective and ineffective programs. Second, the data bases (particularly CLMS) limit the extent to which one can take account of the effects of local labor market conditions. And third, the data were not derived from experiments in which subjects were randomly assigned to take part in a program; consequently, the estimates of program effectiveness require strong assumptions about the adequacy of model specification and matching procedures used to construct synthetic control groups. Finally, we should point out that we received the CLMS-based reports in draft form late in the course of our work, and thus our evaluation of them has not been as intensive as that of the individual YEDPA reports.

Findings From the CLMS

The data from the CLMS have been analyzed by researchers from Westat, Inc. (who concentrated mainly on adult participants in CETA), SRI International, and the Urban Institute. For youth participants in CETA programs, Westat (1984) reported that youth work-experience programs have statistically insignificant effects on employment and earnings for all cohorts and all postprogram years and did not report other specific youth-related findings. The Urban Institute (Bassi et al., 1984:47), however, characterizes Westat's results from earlier reports as follows:

> In looking at youth, Westat (1982) has found that for those youngsters 14 to 15 years old, CETA has had little overall impact. For other young workers net gains are found, being highest once again for OJT [on-the-job training], followed by PSE [public service employment] and classroom training, and being negligible for work experience. The results found for young workers also tend to persist in the second postprogram year. Westat (1981) also produced a technical paper focusing on youth in CETA in which net gains were broken down by sex. As with adults, net gains were greatest for young females, being negligible or insignificant for males. After classifying youth according to their attachment to the labor force, net earnings gains were found to be greatest among structurally unemployed or discouraged workers.

SRI's analysis (Dickinson et al., 1984) differs from Westat's in two key respects: the selection of the comparison group and the sampling frame. SRI's estimates of program effects were substantially lower than Westat's [as summarized by the Urban Institute (Bassi et al., 1984)], for both adults and youths, and the authors spend considerable time in identifying the sources of the differences. From their analyses, the SRI authors conclude that most of the differences could be attributed to choices made in the sampling frame and to an updating of 1979 Social Security earnings.

SRI's findings for 1976 CETA enrollees were as follows:

- Participation in CETA results in significantly lower postprogram earnings for adult men (-$690) and young men (-$591) and statistically insignificant gains for adult women (+$13) and young women (+$185).
- All program activities have negative effects for men, while adult women benefit from Public Service Employment and young women from on-the-job training. Work experience has negative effects for all age and sex groups.
- Both male and female participants are more likely to be employed after CETA, but males are less likely to be in high-paying jobs or to work long hours.
- Length of stay in the program has a positive impact on postprogram earnings, with turning points for young men at 8 months and for young women at 1 month.
- Placement on leaving the program leads to positive earnings gains.

The Urban Institute (Bassi et al., 1984) report focuses separately on youths. The analysts used Westat's match groups from the Current Population Survey (CPS) and estimated net effects for six race/sex groups: male/female by white/black/Hispanic. Both random-effects estimators and fixed-effects estimators were used to identify net effects, but the emphasis was on fixed-effects models to control for selection bias. Net effects were estimated for two postprogram years, 1978 and 1979 (see Appendix D:Table D.2).

The Urban Institute found the following:

- Significant earnings losses for young men of all races and no significant effects for young women, with effects persisting into the second postprogram year.
- For Public Service Employment and on-the-job training, significant positive net effects for young women, particularly minorities.
- For work experience, significant negative or insignificant net effects for all groups.
- Among groups, the most negative findings were for white males, the most positive for minority females.
- Older youths (22-year-olds) and those who had worked less than quarter time had stronger gains or smaller losses than the younger group or those who had worked quarter time or more.

- Earnings gains resulted primarily from increased time in the labor force, time employed, and hours worked rather than from increased average hourly wages.

Findings From the NLS

Two studies have used the NLS data base to make estimates of the aggregate effects of government-sponsored employment and training programs on youths. One study (Moeller et al., 1983) was conducted by the Policy Research Group (PRG) of Washington, D.C.; the second study (Hahn and Lerman, 1983) was conducted by the Center for Employment and Income Studies (CEIS) of Brandeis University. Both studies evaluated the effects of CETA programs on youths although the PRG study expanded its scope to include such schooling programs as vocational education.

The estimates made by both studies indicate relatively modest effects of employment and training programs on the subsequent income, employment status, and educational attainments of the youths who participated in those programs. For CETA programs, both studies find negative overall effects of CETA on employment, although PRG reports some positive effects at 2 years after CETA completion. Reviewing the PRG results and their own findings, Hahn and Lerman (1983:84) note:

> To conclude, both the PRG results and our own show negative and significant effects of CETA on employment variables. It is only after going out two years in time after CETA completion that the PRG report finds evidence of a positive, significant effect and that on only one variable, unsubsidized earnings. We cannot confirm this positive effect, but it would not be inconsistent with our results. It is difficult to claim this as an impressive success for CETA.

The substantive findings from these NLS analyses are generally consistent with the weak and generally negative findings from the CLMS analyses, and we therefore do not review them in great detail here.

Limitations to the Findings:
Bias in Estimates of Effectiveness

Across the three CLMS studies, there is a pattern of preponderantly negative net effects on youths, and the NLS studies show extremely weak effects of program participation. These results obviously invite the conclusion that federally funded employment and training programs have had (in the aggregate) either little effect or a deleterious effect on the future earnings and employment prospects of the youths who participated in the programs. There is, however, empirical evidence that suggests that these estimates may be biased.

The evidence indicates that despite various intensive efforts to select comparison groups that are similar to participants in youth programs and to control for selection bias through the use of fixed-effects estimators, there may still be persistent and systematic (but unmeasured) differences in the earnings profiles of comparison groups and true controls. Such earnings differences, for example, might be due to such unobserved factors as (perceived or actual) differences between program participants and a constructed comparison group in social attitudes, motivation, or ability.

A study by Mathematica (1984) provides important evidence on the potential for bias in the use of matching strategies such as those employed in the NLS and CLMS analyses reviewed above. The Mathematica study used data from a true experimental design that randomly assigned youths to be either program participants or controls (the Supported Work program). It then compared net-impact estimates derived using the experimental design with estimates derived using the same sample of program participants but substituting various "matched samples" constructed from the Current Population Survey. The comparison groups were constructed in a manner designed to simulate those used by the analysts working with the CLMS data.

Using the true control group, Mathematica found in-program earnings gains and negligible postprogram effects for youths. Using the constructed matched samples, however, yielded either insignificant or significantly negative effects. Mathematica argues that biases in the estimates of program effectiveness are likely to exist in other studies that use similar comparison group strategies, which include the Westat, SRI, and Urban Institute studies using the CLMS and the studies based on the NLS.

A further finding of the Mathematica review is the substantial variability in estimates made using different matching strategies on the same data. Not only do the estimates derived from a true control group differ substantially from those derived from a constructed match sample, but the estimates of net impact derived using different matching strategies also differ substantially, from approximately +$122 to -$1,303 (see Appendix D). Given such a broad range of estimated effects and the sensitivity of estimated program effects to alternative assumptions, there must be cause for concern about the nature of the underlying data.

While one may argue about the generalizability of the Mathematica demonstration of bias and variability in the matched sample methodology, the finding has a precedent in the analysis of the Salk polio vaccine trials (Meier, 1972). The Mathematica study highlights two separate problems in net-impact estimations using a matched comparison group: (1) the extent to which employment and training programs recruit or attract participants who differ from eligible nonparticipants in ways that affect subsequent earnings, and (2) the extent to which such differences can be detected and controlled using available demographic or preprogram earnings data. Youths present a particularly difficult problem for any such matching strategy since preprogram earnings data either do not exist or are not reliable indicators of the uncontrolled variables that are of interest to program evaluators.

Estimates of the magnitude and direction of the bias in matched-group evaluations are only available for the one youth program (Supported Work) whose experimental data were reanalyzed by Mathematica.

From this reanalysis we have an elegant demonstration of the fact that commonly used matched comparison group strategies have yielded an inappropriately negative evaluation when the experimental data indicate that the program had a null impact.

There is a natural temptation on the basis of this one result to conclude that biases equal in magnitude and direction affect other comparison group studies. However, there is too little evidence to warrant such a generalization. All we know for certain is that the potential for substantial bias exists in studies that use matching techniques rather than random assignment and that when such biases do occur they can lead to serious errors of inference. (Of course, biases in either direction are theoretically possible.)

Until further work is done, there will be considerable uncertainty as to the extent to which the Mathematica finding generalizes to other program evaluations and to different populations of youths. In order to obtain the requisite data, there will have to be a renewed commitment to randomized experiments so that estimates of the magnitude and direction of these biases can be made.

YEDPA STANDARDIZED ASSESSMENT SYSTEM

A national data base different in major respects from the CLMS and NLS was established by the Educational Testing Service under the auspices of the Office of Youth Programs. A key element of YEDPA's knowledge development strategy called for the establishment of a standardized system for the systematic collection of data on the progress of program participants and the services provided by YEDPA programs. The intent of YEDPA's data gathering was to provide a standardized data base with which to assess the performance of the various YEDPA demonstration projects.

This data collection plan was called the Standardized Assessment System (SAS). It was intended to provide preprogram, postprogram, and follow-up (after 3 and 8 months) data for all youths enrolled in YEDPA demonstration programs. The data collected by SAS included an intake interview, a reading test, and seven scales designed to measure occupational knowledge, attitudes, and related skills. In addition, process data were collected from program sites concerning the implementation of the programs and the services offered at those sites.

In order to investigate the characteristics of the SAS data base, we obtained a copy of the data base (minus individual identifiers). Appendix A presents in detail our assessment of its sampling adequacy, measurement reliability, and measurement validity. Overall, this analysis suggests that sample coverage was poor and subsequent attrition rates were extremely high. Using program operators' reports of enrollment at 166 sites to estimate the size of the target sample for those sites, we found that the majority of the target sample was missed entirely.[1] This sample coverage problem was compounded by high attrition over time: at 3 months postprogram more than 40 percent of the initial sample had been lost. In addition, our examination of the attitude and knowledge measurements in the SAS data base indicated that those measures had low levels of stability over time and that they were only weakly correlated with subsequent success in the job market.

The problems evident in our examination of the SAS data collection effort invite the question of how this might be avoided in the future. In Chapter 1 we present a number of specific recommendations in this regard. There are, however, two more general lessons that should be learned from this experience.

First, the scope of a research effort should match the resources available. In the case of SAS, it is questionable whether any research purpose required that data be gathered from all participants at all sites, but in any event, the available resources were inadequate for such a task. Well-collected data on a sample of participants or program sites would have been much better than the ambitious but poorly executed data-gathering strategy used by SAS.

The second, and related, lesson concerns the dangers of using program operators to collect research data. Collection of research data in a longitudinal study is a demanding task. Like all survey data collections, it requires vigorous follow-up efforts to obtain data from persons who initially refuse to be interviewed or who are hard to reach. It also requires continued contact with respondents over time so as to minimize attrition, together with careful efforts to trace persons who move. While it may seem economical to use program personnel for such tasks, the experience of SAS--and other efforts--suggests that it is a false economy.

---

[1] This estimate is derived from reported enrollments for sites that provided process data for the SAS. Of the 458 sites that provided participant data, only 166 also provided such process data. Obviously it is not possible to tell whether sites that did not provide such process data had higher or lower rates of sample coverage than sites that did provide process data.

References

A.L. Nellum and Associates
1980 Impacts of SYEP Participation on Work-Related Behavior and Attitudes of Disadvantaged Youth, Final Report. Washington, D.C.: A.L. Nellum and Associates.

Anderson, E.
1980 Some observations on black youth unemployment. Pp. 64-87 in B.E. Anderson and I.V. Sawhill, eds., Youth Employment and Public Policy. Englewood Cliffs, N.J.: Prentice-Hall.

Argento, B.J., K. Flaherty, D.M. Geller, and R. Thurman
1982 Job Corps' Educational Improvement Effort: Phase III Final Report. Washington, D.C.: Team Associates.

Bailar, B.A., and N.D. Rothwell
1984 Measuring employment and unemployment. Pp. 129-142 in C.F. Turner and E. Martin, eds., Surveying Subjective Phenomena. Volume 2. New York: Russell Sage Foundation and Basic Books.

Ball, J., and C. Wolfhagen, with D. Gerould, and L. Solnick
1981 The Participation of Private Businesses as Work Sponsors in the Youth Entitlement Demonstration. New York: Manpower Demonstration Research Corporation.

Barth, P.S.
1972 On interprogram manpower studies. Pp. 3-11 in M.E. Borus, ed., Evaluating the Impact of Manpower Programs. Lexington, Mass.: D.C. Heath.

Bassi, L.J., M.C. Simms, L.C. Burbridge, and C.L. Betsey
1984 Measuring the Effect of CETA on Youth and the Economically Disadvantaged. Washington, D.C.: The Urban Institute.

Becker, G.
1957 The Economics of Discrimination. Chicago, Ill.: University of Chicago Press.

Betsey, C.L., and B.H. Dunson
1981 Federal minimum wage laws and the employment of minority youth. American Economic Association Papers and Proceedings May:379-384.

Borjas, G.
1983 The Demographic Determinants of the Demand for Black Labor. Paper presented at Conference on Inner City Black Youth

Unemployment, sponsored by Harvard University and the National Bureau of Economic Research, Cambridge, Mass.

Bowers, N.

1981 Have employment patterns in recessions changed? Monthly Labor Review February:15-28.

Brown, C., C. Gilroy, and A. Kohen

1982 The effect of the minimum wage on employment and unemployment. Journal of Economic Literature 20:487-528.

Bureau of the Census

1973 Volume 1, Characteristics of the Population; Part 1, United States Summary-Section 2. Chapter D: Detailed Characteristics. Washington, D.C.: U.S. Department of Commerce.

1979 Illustrative Projections of World Populations to the 21st Century. Current Population Reports, Series P-23, No. 79. Washington, D.C.: U.S. Department of Commerce.

1982 Projections of the Population of the United States: 1982-2050. Current Population Reports, Series P-25, No. 922. Washington, D.C.: U.S. Department of Commerce.

1984 Fertility of American Women. Current Population Reports, Series P-20, No. 395. Washington, D.C.: U.S. Department of Commerce.

Bureau of Labor Statistics

1982 Labor Statistics Derived from the Current Population Survey. Washington, D.C.: U.S. Department of Labor.

1983 Handbook of Labor Statistics. Bulletin 2175. Washington, D.C.: U.S. Department of Labor.

1984 Employment of School Age Youth, Graduates and Dropouts. Washington, D.C.: U.S. Department of Labor.

Cain, G.G.

1968 Benefit/Cost Estimates for Job Corps. Unpublished paper. Institute for Research on Poverty, University of Wisconsin.

Cogan, J.F.

1982 The decline of black teenage employment: 1950-1970. American Economic Review (September)72:621-638.

Cole, L.F., J.M. Goodison, and D.A. Rock

1982 The Social Demography of Participants and Controls in Youth Employment and Demonstration Projects Act (YEDPA) Programs: Information Derived from the Standard Assessment System Data Base. Final Data Base Report No. 1, Technical Report No. 23. Princeton, N.J.: Educational Testing Service.

Congressional Budget Office

1978 Youth Unemployment: The Outlook and Some Policy Strategies. Washington, D.C.: Congressional Budget Office.

1982 Improving Youth Employment Prospects: Issues and Options. Washington, D.C.: Congressional Budget Office.

Corcoran, M.

1982 The employment and wage consequences of teenage women's nonemployment. Pp. 391-425 in R.B. Freeman and D.A. Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Corporation for Public/Private Ventures

1983 *Longer Term Impacts of Pre-Employment Services on the Employment and Earnings of Disadvantaged Youth*. Philadelphia, Pa.: Corporation for Public/Private Ventures.

Crane J., and D.T. Ellwood

1984 *The Summer Youth Employment Program: Private Job Supplement or Substitute*. Prepared for the U.S. Department of Health and Human Services, under Grant No. 92A-82. Cambridge, Mass.: Harvard University.

Culp, J.M., and B.H. Dunson

1983 Brothers of a Different Color: A Preliminary Look at Employer Treatment of White and Black Youth. Unpublished manuscript.

Diaz, W.A., J. Ball, C. Wolfhagen, with J. Gueron, S. Sheber, and A. Widman

1982 *Linking School and Work for Disadvantaged Youths, The YIEPP Demonstration: Final Implementation Report*. New York: Manpower Demonstration Research Corporation.

Dickinson, K.P., T.R. Johnson, and R.W. West

1984 *An Analysis of the Impact of CETA Programs on Participants' Earnings*. Menlo Park, Calif.: SRI International.

Duncan, O.D.

1984 *Notes on Social Measurement: Historical and Critical.* New York: Russell Sage Foundation and Basic Books.

Educational Testing Service

1980 *Knowledge Development Framework: The Standardized Assessment System*. Youth Knowledge Development Report. Washington, D.C.: U.S. Department of Labor.

Eleey, M.F., and R.D. Leone

1982 *An Evaluation of the Program Effects of Jobs for Delaware Graduates, Inc.* Center for Labor and Human Resource Studies. Philadelphia, Pa.: Temple University.

Ellwood, D.

1982 Teenage unemployment: permanent scars or temporary blemishes. Pp. 349-390 in R.B. Freeman and D.A. Wise, eds., *The Youth Labor Market Problem: Its Nature, Causes, and Consequences*. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

1983 The Spatial Mismatch Hypothesis: Are There Teenage Jobs Missing in the Ghetto? Paper presented at Conference on Inner City Black Youth Unemployment, sponsored by Harvard University and the National Bureau of Economic Research, Cambridge, Mass.

Ellwood, D.T., and D.A. Wise

1983 *Youth Employment in the Seventies: The Changing Patterns of Young Adults*. NBER Working Paper No. 1055. Cambridge, Mass.: National Bureau of Economic Research.

Farkas, G., D.A. Smith, and E.W. Stromsdorfer

1983 The youth entitlement demonstration: subsidized employment with a schooling requirement. *Journal of Human Resources* 18(4):557-573.

Farkas, G., R. Olsen, E.W. Stromsdorfer, L.C. Sharpe, F. Skidmore, D.A. Smith, and S. Merrill

1984 Post-Program Impacts of the Youth Incentive Entitlement Pilot Projects. New York: Manpower Demonstration Research Corporation.

Farkas, G., D.A. Smith, E.W. Stromsdorfer, G. Trask, and R. Jerrett, III

1982 Impacts from the Youth Incentive Entitlement Pilot Projects: Participation Work and Schooling Over the Full Program Period. New York: Manpower Demonstration Research Corporation.

Feldstein, M., and D. Ellwood

1982 Teenage unemployment: what is the problem? Pp. 17-33 in R.B. Freeman and D.A. Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Fleisher, B.M.

1981 Minimum Wage Regulation in Retail Trade. Washington, D.C.: American Enterprise Institute.

Foster, H.L.

1974 Ribbin', Jivin', and Playin' the Dozens: The Unrecognized Dilemma of Inner-City Schools. Cambridge, Mass.: Ballinger.

Freeman, R.B.

1973 Changes in the labor market for black Americans, 1948-1972. Brookings Papers on Economic Activity, No. 1. Washington, D.C.: The Brookings Institution.

1980 Why is there a youth labor market problem? Pp. 6-32 in B.E. Anderson and I.V. Sawhill, eds., Youth Employment and Public Policy. Englewood Cliffs, N.J.: Prentice-Hall.

1982 Economic determinants of geographic and individual variation in the labor market position of young persons. Pp. 115-154 in R.B. Freeman and D.A. Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Freeman, R.B., and H.J. Holzer

1985 Young blacks and jobs: what we now know. Public Interest 78:18-31.

Freeman, R.B., and J.L. Medoff

1982 Why does the rate of youth labor force activity differ across surveys? Pp. 75-114 in R.B. Freeman and D.A. Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Freeman, R.B., and D.A. Wise, eds.

1982 The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Fuller, W.C., and V.I. Nelson

1982 A Framework For Synthesis of Youth Demonstration Projects Data. Unpublished paper.

Goldstein, J.H.

1973 The effectiveness of manpower training programs: a review of research on the impact on the poor. *Studies in Public Welfare*, Paper No. 3. Subcommittee on Fiscal Policy, Joint Economic Committee of the Congress of the United States. Washington, D.C.: U.S. Government Printing Office.

Gould, W., M. Ward, and F. Welch

1982 *Measuring Displacement; An Econometric Approach*. Los Angeles, Calif.: Unicon Research Corporation.

Gueron, J.

1984 *Lessons From a Job Guarantee: The Youth Incentive Entitlement Pilot Project*. New York: Manpower Demonstration Research Corporation.

Hahn, A., and R. Lerman

1983 *The CETA Youth Employment Record*. Washington, D.C.: U.S. Department of Labor.

1984 *What Works in Youth Employment Policy?* Washington, D.C.: National Planning Association.

Hall, R.E.

1982 The minimum wage and job turnover in markets for young workers. In R.B. Freeman and D.A. Wise, eds., *The Youth Labor Market Problem: Its Nature, Causes, and Consequences*. Chicago, Ill.: University of Chicago Press.

Hashimoto, M.

1982 Minimum wage effects on training on the job. *American Economic Review* 72:1070-1087.

Heckman, J.J.

1979 Sample selection bias as a specification error. *Econometrica* 47(January):153-161.

Hindelang, M.J., T. Hirschi, and J.G. Weis

1981 *Measuring Delinquency*. Volume 123, Sage Library of Social Research. Beverly Hills, Calif.: Sage Publications.

Johnson, G.E.

1979 The labor market displacement effect in the analysis of the net impact of manpower training programs. Pp. 227-257 in F.E. Bloch, ed., *Evaluating Manpower Training Programs. Research in Labor Economics. Supplement I*. Greenwich, Conn.: JAI Press.

Kemper, P.

1980 *Supported Work Evaluation Supplementary Paper: Indirect Labor Market Effects in Benefit-Cost Analysis*. Princeton, N.J.: Mathematica Policy Research.

Kerachsky, S., and C. Mallar

1977 *Evaluation of the Economic Impact of the Job Corps Program: Interim Report, Volume I*. Princeton, N.J.: Mathematica Policy Research.

Kosters, M., and F. Welch

1972 Effects of the minimum wage on the distribution of changes in aggregate employment. *American Economic Review* 62:323-332.

Lazear, E.P., and F.H. Miller

1981 Minimum wages versus minimum compensation. In Minimum Wage Study Commission, *Report of the Minimum Wage Study Commission*. Washington, D.C.: U.S. Government Printing Office.

Leonard, J.S.

1984 *The Interaction of Residential Segregation and Employment Discrimination*. NBER Working Paper No. 1274. Cambridge, Mass.: National Bureau of Economic Research.

Lerman, R.I.

1980a An analysis of youth employment problems. In Vice President's Task Force on Youth Employment, *A Review of Youth Employment Problems, Programs and Policies*. Volume I. Washington, D.C.: U.S. Government Printing Office.

1980b *The Future of the Youth Employment Problem: A Review Paper*. Technical Analysis Paper No. 69, Office of the Assistant Secretary for Policy, Evaluation and Research. Washington, D.C.: U.S. Department of Labor.

Mallar, C., S. Kerachsky, C. Thornton, and D. Long

1982 *Evaluation of the Economic Impact of the Job Corps Program, Third Follow-Up Report*. Princeton, N.J.: Mathematica Policy Research.

Mare, R.D., and C. Winship

1983 *Racial Socioeconomic Convergence and the Paradox of Black Youth Joblessness: Enrollment, Enlistment, and Employment, 1964-1981*. NORC Economics Research Center Discussion Paper. Chicago, Ill.: National Opinion Research Center.

Masters, S.

1981 The effects of Supported Work on the earnings and transfer payments of its AFDC target group. *Journal of Human Resources* 16(4):600-636.

Mathematica Policy Research

1984 *An Assessment of Alternative Comparison Group Methodologies for Evaluating Employment and Training Programs*. Princeton, N.J.: Mathematica Policy Research.

Maynard, R.

1980 *The Impact of Supported Work on Young School Dropouts*. Princeton, N.J.: Mathematica Policy Research.

Maynard, R., E. Cavin, and J. Schore

1982 *Post-Program Impacts of Supported Work on Young School Dropouts: Results from a Follow-Up Survey*. Princeton, N.J.: Mathematica Policy Research.

Meier, P.

1972 The biggest public health experiment ever: the 1954 field trial of the Salk poliomyelitis vaccine. In J. Tanur, ed., *Statistics: A Guide to the Unknown*. San Francisco, Calif.: Holden-Day.

Meyer, R., and D. Wise

1982 High school preparation and early labor force experience. Pp. 277-347 in R.B. Freeman and D.A. Wise, eds., *The Youth Labor Market Problem: Its Nature, Causes, and Consequences*. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Mincer, J.E.

1976 Unemployment effects of minimum wages. *Journal of Political Economy* 84:S104.

Minimum Wage Study Commission
1981 Report of the Minimum Wage Study Commission. Washington, D.C.: U.S. Government Printing Office.

Moeller, J., R. Hayes, and I. Witt
1983 Socioeconomic Impacts of Recent Government-Subsidized Employment and Training Programs on Youth. Washington, D.C.: Policy Research Group.

Murphy, R.T., and L.R. Appel
1981 Assessment of the National Puerto Rican Forum School to Work Program, Year 1, October 1979-June 1980. Technical Report No. 11. Princeton, N.J.: Educational Testing Service.

National Commission on Employment and Unemployment Statistics
1979 Counting the Labor Force. Washington, D.C.: U.S. Government Printing Office.

National Council on Employment Policy
1980a An Anatomy of School-to-Work Transition Projects. Prepared by B. Dunn and R. Taggart. Washington, D.C.: National Council on Employment Policy.
1980b Getting There: A Case Study Report on the Lives, Employment Preparation, and Prospects of YEDPA Participants. Based on the findings of the Youth Perspectives Project, November 1978-June 1979. Prepared by B. Snedeker. Washington, D.C.: National Council on Employment Policy.
1980c Overview to the Local Focus on Youth: A Review of Prime Sponsor Experience Implementing the Youth Employment and Demonstration Projects Act. Prepared by G. Wurzburg. Washington, D.C.: National Council on Employment Policy.
1980d Youth and the Local Employment Agenda: An Analysis of Prime Sponsor Experience Implementing the Youth Employment and Demonstration Projects Act. Overview and Area Summaries, Final Report. Prepared by G. Wurzburg. Washington, D.C.: National Council on Employment Policy.

Ogbu, J.U.
1984 Minority Education and Caste. New York: Academic Press.
1985a Cultural Boundaries and Minority Youth Orientation Toward Work. Paper delivered at Symposium on Adolescents' Orientation Toward Work, Institute for Human Development, University of California, Berkeley.
1985b Stockton, California, revisited: joining the labor force. In K.M. Borman, ed., Becoming a Worker. New York: Ablex.

Osterman, P.
1980a The employment problems of black youth: a review of the evidence and some policy suggestions. In Vice President's Task Force on Youth Employment, A Review of Youth Employment Problems, Programs and Policies. Volume II. Washington, D.C.: U.S. Government Printing Office.
1980b Getting Started: The Youth Labor Market. Cambridge, Mass.: MIT Press.

Perry, C., B. Anderson, R. Rowan, and H. Northrup
1975 The Impact of Government Manpower Programs in General, and on Minorities and Women. Industrial Research Unit, The Wharton School. Philadelphia: University of Pennsylvania.

Polit, D., J. Kahn, and D. Stevens
1985 *Final Impacts From Project Redirection: A Program for Pregnant and Parenting Teens*. New York: Manpower Demonstration Research Corporation.

Presser, H., and W. Baldwin
1980 Child care as a constraint on employment: prevalence, correlates, and bearing on the work and fertility nexus. *American Journal of Sociology* 85:1202-1213.

Rees, A., and W. Gray
1982 Family effects in youth employment. Pp. 453-473 in R.B. Freeman and D.A. Wise, eds., *The Youth Labor Market Problem: Its Nature, Causes, and Consequences*. Chicago, Ill.: University of Chicago Press.

Reimers, C.W.
1983 Labor market discrimination against Hispanic and black men. *Review of Economics and Statistics* 65:570-579.

Rivera-Casale, C., B. Friedman, and R. Lerman
1982 *Can Employer or Worker Subsidies Raise Youth Employment? An Evaluation of Two Financial Incentive Programs for Disadvantaged Youth*. Center for Employment and Income Studies, Heller Graduate School. Waltham, Mass.: Brandeis University.

Rock, D.A., N.E. Freeberg, D.A. Trismen, and J.M. Goodison
1982 *Demonstration Programs For Youth Employment Training: The Evaluation of Various Categories of YEDPA Program Sites*. Final Data Base Report No. 2, Technical Report No. 24. Princeton, N.J.: Educational Testing Service.

Rossi, P.H., and M.D. Ornstein
1973 The impact of labor market entry factors: illustrations from the Hopkins Social Accounts Project. In W. Muller and K.U. Mayer, *Social Stratification and Career Mobility*. Paris: Mouton.

Scharfman, V.S.
1981 *The Supported Work Youth Variation: An Enriched Program for Young High School Drop-outs*. New York: Manpower Demonstration Research Corporation.

Stevenson, W.
1978 The relationship between early work experience and future employability. In A. Adams and G. Mangum, eds., *The Lingering Crisis of Youth Unemployment*. Kalamazoo, Mich.: Upjohn Institute for Employment Research.

Taggart, R.
1980 Youth Knowledge Development: The Process and Product. Unpublished paper.

Treiman, D.J., and H.I. Hartmann, eds.
1981 *Women, Work, and Wages: Equal Pay for Jobs of Equal Value*. Committee on Occupational Classification and Analysis, National Research Council. Washington, D.C.: National Academy Press.

Trismen, D.A.

1982 Assessment of the National Puerto Rican Forum Program, 1980-1981. Technical Report No. 20. Princeton, N.J.: Educational Testing Service.

Turner, C.F., and E. Martin, eds.

1981 Surveys of Subjective Phenomena: Summary Report. Panel on Survey Measurement of Subjective Phenomena, Committee on National Statistics, National Research Council. Washington, D.C.: National Academy Press.

1984 Surveying Subjective Phenomena. Panel on Survey Measurement of Subjective Phenomena, Committee on National Statistics, National Research Council. New York: Russell Sage Foundation and Basic Books.

U.S. Congress

1977 Conference Report 95-456. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Commerce

1982 Statistical Abstract of United States 1980-82. Washington, D.C.: U.S. Department of Commerce.

1985 Statistical Abstract of the United States: 1985. Washington, D.C.: U.S. Department of Commerce.

U.S. Department of Labor

1978 to 1982 Employment and Training Report of the President. Annual report. Washington, D.C.: U.S. Department of Labor.

1980a Factbook on Youth. Youth Knowledge Development Report 2.5. Washington, D.C.: U.S. Department of Labor.

1980b Knowledge Development Activities Fiscal 1978-1979. Youth Knowledge Development Report. Washington, D.C.: U.S. Department of Labor.

1980c Knowledge Development Framework: The Knowledge Development Agenda. Youth Knowledge Development Report. Washington, D.C.: U.S. Department of Labor.

1985a Economic Report of the President. Washington, D.C.: U.S. Department of Labor.

1985b Employment and Earnings 32(1). Washington, D.C.: U.S. Department of Labor.

U.S. General Accounting Office

1979 More Effective Management is Needed to Improve the Quality of the Summer Youth Employment Program. Washington, D.C.: U.S. Government Printing Office.

Venti, S.F.

1984 The effects of income maintenance on work, schooling, and non-market activities of youth. Review of Economics and Statistics 66:16-25.

Venti, S.F., and D.A. Wise

1984 Income Maintenance and the School-Work Decisions of Youth. Unpublished manuscript.

Vice President's Task Force on Youth Employment

1980 A Review of Youth Employment Problems, Programs and Policies. Volume 1. Washington, D.C.: U.S. Government Printing Office.

Wachter, M., and C. Kim
1982 Times series changes in youth joblessness. Pp. 155-198 in R.B. Freeman and D.A. Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. National Bureau of Economic Research Conference Report. Chicago, Ill.: University of Chicago Press.

Welch, F., and J. Cunningham
1978 Effects of minimum wages on the level and age composition of youth unemployment. Review of Economics and Statistics 60:140-145.

Westat, Inc.
1981 Continuous Longitudinal Manpower Survey. Net Impact Report No. 1. Impact of 1977 Earnings on New FY 1976 CETA Enrollees in Selected Program Activities. Rockville, Md.: Westat, Inc.
1982 Continuous Longitudinal Manpower Survey. Net Impact Report No. 2. Impact of CETA on 1978 Earnings: Participants Who Entered CETA During July 1976 through June 1977. Draft. Rockville, Md.: Westat, Inc.
1984 Summary of Net Impact Results. Rockville, Md.: Westat, Inc.

Williams, G.D., E.P. Davin, B. Barrett, and J.M. Richards, Jr.
1981 Report on Impacts: Study of New Youth Initiatives in Apprenticeship. Washington, D.C.: CSR, Inc.

Woltman, H.R., and W.W. Walton
1968 Evaluation of the War on Poverty: The Feasibility of Benefit-Cost Analysis for Manpower Programs. Unpublished report prepared for the U.S. General Accounting Office. Bethesda, Md.: Resource Management Corporation.

Zimmerman, D.
1980 A Study of the Value of Output of Participants in the Summer Youth Employment Program. Draft Final Report. Princeton, N.J.: Mathematica Policy Research.

APPENDICES

APPENDIX
A

Standardized Data Collection for Large-Scale Program Evaluation: An Assessment of the YEDPA-SAS Experience

Charles F. Turner

The Youth Employment and Demonstration Projects Act (YEDPA), as noted in Chapter 3, provided the Department of Labor (DOL) and its new Office of Youth Programs (OYP) with a mandate to test the relative efficacy of different methods of dealing with the employment problems of young Americans. The legislative concern with learning "what works for whom" was consistent with the frequently stated contention that decades of federal funding for similar programs had not yielded much in the way of reliable knowledge. And so, a key element of YEDPA's knowledge development strategy was the establishment of a standardized system for the systematic collection of data on the progress of program participants and the services provided by YEDPA programs.

STANDARDIZED ASSESSMENT SYSTEM

In order "to document administrative outcomes, to monitor performance, and to continually assess program impacts and lessons" from YEDPA programs, the Office of Youth Programs launched a large-scale data gathering operation in collaboration with the Educational Testing Service (ETS). The intent of the data gathering was to develop a standardized data base with which the performance of the various programs that YEDPA comprised could be assessed. This data gathering plan, called the Standardized Assessment System (SAS), was ambitious in its aim. SAS was *intended* to provide preprogram, postprogram, and follow-up data (3 and 8 months after program completion) for almost 50 percent of the youth served by these programs (Taggart, 1980).

The SAS data base is an important component of the YEDPA knowledge development enterprise not only because it was a salient feature of the YEDPA effort, but also because it provided the basic data used in evaluating a large number of the YEDPA programs. The characteristics

---

Charles F. Turner was senior research associate with the committee.

of this data base are thus of concern to us in evaluating what was learned from the YEDPA experience. In the following pages we describe the SAS data collection procedures and evaluate the characteristics of the data obtained, e.g., the coverage of the sample and the reliability and validity of the measurements.

Data Collection Instruments

The SAS data collection instruments included an intake interview, called the Individual Participant Profile (IPP); a reading test (STEP); a battery of seven measures of occupational knowledge, attitudes, and related skills administered preprogram and postprogram; a program completion interview; interviews at 3 and 8 months postprogram; and evaluations by counselors (postprogram) and employers or work supervisors (postprogram and 3 and 8 months later). In addition, data were collected from program sites concerning the implementation of the program and the services offered, and data were also collected from "control" groups recruited by program operators to provide comparison samples for program evaluation.

In this section each of the data collection instruments is briefly described. The descriptions of the instruments are taken from The Standardized Assessment System for Youth Demonstration Projects (Educational Testing Service, 1980). Where suitable we have used the ETS phrasing or paraphrased the descriptions without repeated citation of the source.

Individual Participant Profile

The Individual Participant Profile was used to record information on 49 participant characteristics as well as status while in the program and at termination. These data essentially duplicated the standard information gathered on each participant in all Comprehensive Employment and Training Act (CETA) programs. The first 29 items were largely demographic, covering such information as the individual's age, sex, race, and economic, educational, and labor-force status--all at time of entry into the youth program. The remaining 20 items were "program status" items, which indicated the status of the participant at the time of program completion or termination. These included such information as entry and termination dates, total hours spent in the program, whether the program provided the participant with academic credit, and specific forms of "positive" and "nonpositive" termination. (A set of definitions accompanying the IPP form defined each item in some detail and how it was to be completed by the youth program project personnel from their project records.)

STEP Reading Scale

The STEP reading scale was a short (10 to 15 minutes) measure of reading skill that was intended to cover the wide range of reading levels found among the YEDPA enrollees (approximately fourth to ninth grade reading level by ETS's estimate). Twenty items were selected from the STEP locator tests covering fourth to ninth grade reading levels. Those locator tests are short reading-comprehension measures ordinarily used as screening devices for deciding which level of the full STEP achievement tests is suitable for administration.

Job Knowledge and Attitudes Battery

Measures chosen for incorporation in the Job Knowledge and Attitudes battery were intended to reflect YEDPA program objectives while still being compatible with the characteristics of the trainee population and the operational constraints of the youth projects. As a starting point, five behavioral areas thought to be affected by YEDPA program participation were defined by the Office of Youth Programs. These were considered to encompass the objectives of a vast majority of the YEDPA projects and were designated as (1) career decision making, awareness, and capability, (2) self-image, (3) work attitudes, (4) job search capability, and (5) occupational sex stereotyping.

Criticism of the design and administration of conventional paper-and-pencil tests used with similar youth led SAS designers to seek measures that were relatively short, presented orally, pictorial as well as verbal, and appropriate in level and style of language for adolescents or young adults of low reading skill. In addition the battery allowed the item responses to be marked directly in the test booklet. Examples of items from each of the Job Knowledge and Attitudes battery are shown in Figure A.1.

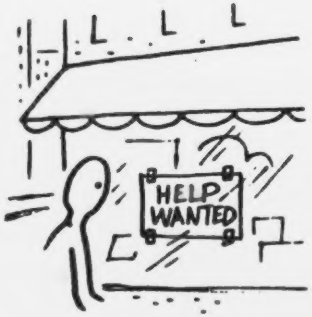
The designers of SAS chose two measures to assess what they termed career decision making, awareness, and capability performance. One measure dealt with the "vocational maturity" of adolescents in making appropriate career decisions, and the other with the youth's knowledge of what is required for carrying out different jobs.

Vocational Attitude Scale This scale contained 30 verbal items, which were scorable as three 10-item subscales. Those scales were designated as "Decisiveness," "Involvement," and "Independence" in career decision making. The respondent indicated his or her agreement or disagreement with each of 30 statements about vocational careers and employment.

Job Knowledge Test This 33-item scale dealt with the qualifications, requirements, and tasks involved in various jobs. The items, in multiple-choice format, required the respondent to indicate the correct response to questions about the specific occupations depicted.

Self-Esteem Scale Youth programs often seek to enhance the participant's feelings of personal value, or self-worth, with the expectation that improved self-perception will stimulate more success-oriented social and vocational adjustment behaviors. The SAS

VOCATIONAL ATTITUDES



How would you feel if you saw this sign?

○ I might try for a job in that store, but they probably wouldn't want me.

○ They would turn me down cold and wouldn't think I'm worth giving a chance.

○ They would think I'm worth hiring for a job in that store.

WORK RELATED ATTITUDES

Most bosses have it in for you and give you a hard time.

☐ strongly agree
☐ somewhat agree
☐ somewhat disagree
☐ strongly disagree

SEX ROLE STEROTYPING

Fire fighters work at putting out fires.

Who do you think **SHOULD** be fire fighters?

☐ Only women
☐ More women than men
☐ About the same number of men and women
☐ More men than women
☐ Only men

JOB SEARCH SKILLS

SALES HELP WANTED
SALESPERSON
CAMERAS
APPLIANCES
RADIO & TV

ROBERTSON'S
VALLEY STREAM

Top notch experienced sales person needed for our newest store in the Green Acres Shopping Center.

1 PM — 10 PM, 5 days
or
6 PM — 10 PM
High Salary + PMs

Opportunity to Advance
Excellent Benefit Program
Apply at
Employment Office
480 Sunrise Hwy. Valley Sam
An Equal Opportunity Employer

What would you do on this job?

○ Fix cameras and radios.

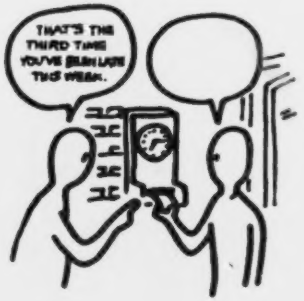
○ Sell things in a store.

○ Teach people how to drive a car.

○ Sell houses to people.

BEST COPY AVAILABLE

JOB HOLDING SKILLS


THAT'S THE THIRD TIME YOU'VE BEEN LATE THIS WEEK.

What would you say to a boss who said this to you?

○ Sorry, I'll try to get here on time from now on.

○ It's tough for me to make it here on time but I'll try.

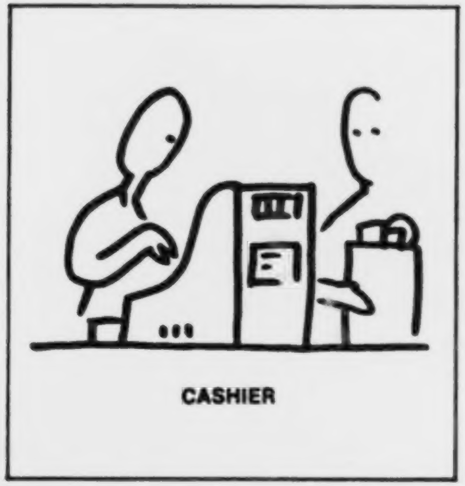
○ I do my work—what's the difference if I'm late.

SELF ESTEEM

T ☐ F ☐ It's probably just as easy to be successful in one occupation as it is in another.

T ☐ F ☐ It doesn't matter which job you choose as long as it pays well.

JOB KNOWLEDGE



Where would you work on this job most of the time

○ In a factory on the assembly line

○ In the kitchen of a restaurant

○ In a store

○ In your own home

FIGURE A.1 Examples of items from Job Knowledge and Attitudes battery.

SOURCE: Educational Testing Service (1980).

designers included one measure that attempted to define the level at which the program participant rated his or her personal value. The self-esteem scale was a 15-item scale containing pictorial and verbal material used to assess perceived self-worth in terms of expectations for acceptance or achievement in various social, vocational, and educational settings. The respondent indicated, on a three-point scale, the degree to which he or she would be successful or receive acceptance in the specific situation portrayed.

Work-Related Attitudes Inventory This inventory was intended to measure the youth's views about jobs, the importance of working, appropriate ways of behaving in job settings, and general feelings about his or her capabilities for succeeding in a work situation. The inventory contained 16 items that provided both a total score and scores for three subscales defined as "Optimism," "Self-Confidence," and "Unsocialized Attitudes." The response to each of the attitudinal statements was based on a four-point scale of degree of agreement with, or applicability of, the statement.

Job Holding Skills Scale This scale dealt with respondent awareness of appropriate on-the-job behaviors in situations involving interaction with supervisors and coworkers. This 11-item scale, containing pictorial and verbal material, required the respondent to indicate which one of three alternatives best defined what his or her response would be in the situation described. (Response alternatives were scaled in terms of "most" to "least" acceptable behaviors for maintaining employment.)

Job Seeking Skills Test This test was intended to measure elementary skills essential for undertaking an employment search. This test had 17 items that sampled some of the skills needed to initiate an employment search, interpret information about prospective jobs (in newspaper want ads), and understand the information requirements for filling out a job application. The items, in a multiple-choice format, required selection of the one correct response to each question.

Sex Stereotyping of Adult Occupations Scale This scale attempted to measure attitudinal perceptions of sex roles in occupational choice. This relatively short (21 item) verbal scale presented job titles along with a one-sentence description of each job and required the respondent to indicate "who should be a ___________" (job title as given). A five-point response scale ranged from "only women" to "only men."

Project and Process Data

In addition to the range of information collected on program participants and controls, the SAS attempted to measure the types of activities, the progress of program implementation, and the range of services being offered at each program site. This information was expected to be of potential use not only as contextual data for the analysis of program outcomes, but also as data for reports to managers and policymakers about the implementation of the various YEDPA programs.

The Project and Process Information questionnaire contained six sets of questions that reported on key site-specific variables in quantitative terms. First, basic information was gathered about the site, setting, and sponsors of the project. Second, the project was described in terms of its services, activities, and goals. Third, the linkages involved in the project were described. Fourth, the staff involved in the project were profiled. Fifth, the project stability and the position of the project on the learning curve were assessed. Finally, the project costs were measured.

Outcome Measures

The outcomes of the programs were measured at program completion and 3 and 8 months after program departure. Two questionnaires were used for this purpose: the "Program Completion Survey" and the "Program Follow-up Survey." (The same instrument was used 3 and 8 months postprogram.)

Program Completion Survey This questionnaire contained 48 items, most of which were phrased as questions to be presented to the youth at the time he or she had completed or was leaving the training program. They covered the participant's activities in the program, attitudes about the program, job and educational aspirations, and expectations and social-community adjustments. The questions were intended for oral presentation to the individual by an interviewer. (A parallel questionnaire containing similar material was designed for use with control group members and was designated the "Control Group Status Survey.")

Program Follow-up Survey This 50-item questionnaire was designed to be administered orally to the individual by an interviewer, who also recorded the participant's responses. The survey was intended for use 3 months after the participant had left the training program and again at 8 months following program participation. Questions dealt with the former participant's posttraining experiences in areas of employment, education, social adjustments, and future plans. (A parallel version of the follow-up survey was used with control group members and was designated the "Control Group Follow-up Survey.") In addition, a five-item Employer Rating Form was to be completed by the present (or most recent) employer. (Permission to interview the employer had to be granted by the youth.)

Concerns about Instrument Reliability and Validity

In introducing the SAS measuring instruments, the designers at the Educational Testing Service warned that (Educational Testing service, 1980)

> more careful testing of the instruments would have been preferable but it was necessary to develop these measures while implementing certain programs. The instruments . . . represent the best possible compromise between the many constraints at the time the system was implemented.

A particular concern expressed by the SAS designers involved the nature of the youth population from whom data were being collected. Given a population characterized as economically disadvantaged and largely products of inner-city school systems, they anticipated that the validity of any available paper-and-pencil test might be suspect. For this reason the documentation of the SAS instruments stressed the (1) use of measures that employ pictures as well as words, (2) use of an administrator who would read items aloud so that the youth could follow along, and (3) the administration of the tests to small groups--so that literacy (or other) problems might be more easily detected.

Despite these precautions, it can never be assured in a data gathering operation such as SAS that measurements were made in the manner prescribed. The test administrators were not ETS employees, but rather program personnel assigned to fulfill YEDPA's "data reporting" requirement. While ETS did provide instruction to one person at each program site, that person was not necessarily the one who administered the measurements. Moreover, staff turnover may have put some people in the position of serving as test administrator with little or no (or wrong) instruction on how to administer the instruments. Since one of the canons of testing is that the manner of test administration can have important effects on measurement, it is natural that concerns about the reliability and validity of the SAS measurements were voiced by outsiders--as well as by ETS.

Almost all of the SAS scales used previously published tests, and there did exist a literature that documented the characteristics of the scales and estimated their reliability and predictive validity with various populations. These populations, however, were not identical to the YEDPA youth who would be tested with the SAS. Thus, it did not necessarily follow that the readings of test reliability and validity obtained from these groups could be generalized to the youth population targeted by YEDPA.

In its 1980 report on the Standardized Assessment System, ETS presented evidence for the reliability and validity of the SAS scales.[1] Some of this evidence predates YEDPA and may have been used in the decision making about which instruments to use in SAS. The evidence is derived from studies of small samples of youths participating in Neighborhood Youth Corps (NYC) and Opportunities Industrialization Center (OIC) training programs. For four of the SAS scales, Table A.1 presents the correlations found between scale scores and various criteria of "success" in these programs. Reported correlations range from .18 to .36. Two measures show significant correlations with success in finding employment after program completion--the Job Knowledge scale (r = .22 in NYC sample) and the Job Search Skills scale (r = .36 in NYC sample, and .21 in OIC sample). The other two scales, Job Holding and Self-Esteem, do not show significant associations with postprogram employment, but do show positive associations with evaluations given by guidance counselors and work training supervisors.

---

[1] ETS (1980) presents estimates of reliability and validity in cases where there are "significant" results (p less than .01 or p less than

The 1980 report on SAS also provides early SAS data from samples of high school seniors participating in the Youth Career Development project (n = 1,666) and their control group (n = 1,590). Estimates of predictive validity using selected criterion measures (and Cronbach's alpha for the scales) are shown in Table A.2. The range of correlations for this sample are generally lower than those found in the earlier studies. In particular, only two scales (Vocational Attitudes and Work-related Attitudes) show significant correlations with postprogram activity (coded 2 for full-time school or work, 1 for part-time school or work, and 0 otherwise). These correlations were very modest in size (r = .12 and .10). The scales did show somewhat higher correlations with level of present job and a negative correlation with amount of time required to find the present job.

Overall, however, the preliminary evidence presented by ETS suggests that (1) the seven scales are not powerful predictors of postprogram employment and (2) the measurement characteristics of these scales when administered in SAS may be different from those found elsewhere. (Whether the latter might be a function of the population tested, lack of standardization in administration, or some other cause, is difficult to say.)

.05). Thus it is not possible in Table A.1 and A.2 to report their estimates for all variables and for each criterion measure.

In selecting ETS "validity" measures to reproduce in Table A.2 and in designing our own analyses (reported in Table A.10 and A.12) we have focused on the prediction of future rather than concurrent outcomes where the outcome variables involved assessments by observers other than the subject (e.g., an employer's evaluation of the subject at 3 months postprogram) or involved reports of relatively objective statuses (e.g., Are you employed full time?). We believe that this procedure provides more appropriate information about the usefulness (for program evaluation) of the SAS assessment battery than procedures that depend exclusively on more subjective reports from the respondent (e.g., assessments of job satisfaction or adjustment).

TABLE A.1 ETS Estimates of Predictive Validity of SAS Attitude and Knowledge Measurements

SAS Measurement	Criterion Predicted	Sample (n)	r
Job knowledge	Work supervisor rating	NYC (109)	.32
	Counselor rating	NYC (109)	.25
	Counselor rating	OIC (220)	.19
	Vocational skills instructor rating	OIC (261)	.20
	Posttraining employment	NYC (104)	.22
Job holding skills	Counselor rating	NYC (111)	.31
	Work supervisor rating	NYC (111)	.34
	Vocational skills instructor rating	OIC (260)	.15
	Remedial skills instructor rating	OIC (134)	.18
Job seeking skills	Counselor rating	NYC (111)	.22
	Work supervisor rating	NYC (111)	.31
	Posttraining employment	NYC (104)	.36
	Posttraining employment	OIC (157)	.21
Self-esteem	Counselor rating	NYC (111)	.34
	Work supervisor rating	NYC (111)	.24
	Remedial skills instructor rating	OIC (134)	.18

SOURCE: Educational Testing Service (1980).

CHARACTERISTICS OF THE DATA BASE

Completeness of Initial Coverage

According to ETS, the Standardized Assessment System was designed to provide a complete enumeration of all participants (together with appropriate controls) in all YEDPA demonstration projects. In their words (Educational Testing Service, 1980):

> In a literal sense there is no "sampling" with respect to enrollees at a demonstration site since evaluation data are to be collected on the performance of all enrollees at a particular site. The control group at a particular site, however, does represent a sample from a hypothetical population that is, hopefully, similar to the enrollees with respect to important background and ability variables.

The difficult task of ensuring that data were collected in a standardized manner from all program participants was not, however, under the control of ETS. The Department of Labor had arranged for data to be collected by individual program operators; administration

TABLE A.2 ETS Estimates of Reliability and Predictive Validity of SAS Instruments

		Predictive Validity		
SAS Measurement	Internal Consistency (Alpha)	Time to Find First Job	Activity Status(a)	Level of Present Job
Vocational attitudes	.74	b	.12	.21
Job knowledge	.66	b	b	.23
Job holding skills	.56	-.16	b	.28
Work-related attitudes	.78	-.17	.10	.18
Job seeking skills	.66	-.16	b	.24
Sex stereotyping	.90	-.26	b	.16
Self-esteem	.60	-.17	b	.15

NOTE: Predictive validity estimates are for 3 months postprogram for YCD participants. Sample sizes range from 120 to 790 for validity estimates. Reliability estimates are average of values reported for participants and controls (combined n = 3,256).

[a] Activity status coded 0 for not working or in school, 1 for part-time work or school, and 2 for full-time work or school. It is not clear from the text how *both* part-time work and part-time school would be coded.
[b] Not significant.

SOURCE: Educational Testing Service (1980).

and execution of the data collection were not ETS's responsibility. ETS contracted to process the data supplied by the program operators (and, in a number of cases, to analyze that data).[2] Indeed, most ETS discussions of the SAS data base contain forceful disclaimers that "collection of *all* data with the Standardized Assessment System instruments remained the *sole* responsibility of the service delivery agents who were required to assign suitable staff at each project site for carrying out the data gathering tasks" (ETS, 1982:15, emphasis in original).

As a result of this delegation of data gathering responsibility to the program operators, there was known to be quite incomplete reporting of data. Although the precise magnitude of the incompleteness of the initial coverage was not known, ETS has informally speculated that up to 50 percent of the program participants may have been missed.

---

[2] ETS involvement in the data collection grew out of evaluation studies begun by N. Freeberg and D. Rock of Youth Career Development and Service-Mix Alternatives projects.

To investigate the characteristics of the SAS data base, we obtained a copy of the data base (minus individual identifiers).[3] Because data were collected from program sites on the number of new persons enrolled each month, it is possible to gain some insights into the nature and magnitude of the incompleteness of coverage. Using the "process data" provided by each site, we tabulated the total number of persons reported to be enrolled in YEDPA demonstration programs. We then tabulated data on individual participants by site to obtain an indication of the proportion of enrollees who were missing from the participant file.

As with all attempts at complete enumeration, the estimation of undercoverage is not straightforward unless there exists a valid count for the true size of the population being enumerated. In the present case, it is likely that the month-by-month counts of new program entrants were figures that program operators had readily at hand. (This results from the fact that payments to programs are tied to the number of entrants--which, of course, introduces its own potential for distortions in reporting.) If we take the reports of total enrollments at site i (E_i) as an indicator of the total number of persons who should have been interviewed and tested, then, for any single site, the incompleteness of coverage can be represented by the ratio (N_i/E_i) where N_i is the sample count in the participant data file for site i. For example, if a site said it enrolled 2,000 youth but only 1,200 respondents from that site could be located in the participant file, then the coverage rate could be said to be 1,200/2,000 or 60 percent. (Note, however, how inflating of enrollment figures by program operators or mechanical errors in data entry or matching might bias this estimate.)

If all program sites accurately reported enrollment data, we might then make a confident estimate of the completeness of coverage by summing across sites ($\Sigma N_i/\Sigma E_i$). The data do not, however, comply so readily with our wishes. Incompleteness affects not only participant data, but also the process data.

Analysis of the process data collected from individual program sites (shown in Table A.3) reveals that the majority of program sites did not provide data on their program operations. This can be detected within the ETS data base because site codes appear on both respondent records and site records. We thus know (assuming the site codes have

---

[3] Three observations should be made about technical aspects of the data sets. First, the documentation provided with the data sets was not always adequate. Second, although the data have a hierarchical structure (there are respondents within sites within programs), the data sets are not designed to encourage analyses that make use of that hierarchical structure. Third, no procedural history exists for the data gathering. Thus it is unclear how many sites were contacted for data, how many sites provided data that was judged "suspicious," how ETS "winnowed" the data set to eliminate "suspicious" data, and so forth.

TABLE A.3 Cross-tabulation of Availability of Site "Process" Data in YEDPA/SAS Data Base by Availability of Participant Data

	Site "Process" Data	
Participant Data	Missing	Reported
No data	Unknown (n = 0)[a]	24 sites (n = 0)[a]
Data on one or more participants from site	292 sites (n = 21,839 part.) (n = 8,774 cont.)	166 sites (n = 12,733 part.) (n = 6,836 cont.)
Total reported enrollment	Unknown	29,272 enrollees

NOTE: Numbers in parentheses are total number of participant (part.) and control (cont.) cases in respondent data base for those sites.

[a] Sites provided no participant or control data.

been accurately recorded) that 458 program sites provided some participant data to ETS. Of those 458 sites only 166 provided "process" data on site operations. Not only do these "missing" sites constitute the majority of identifiable sites, but they also account for the majority of the respondents whose data were supplied to ETS (30,613 of 50,182 respondents in the data base came from sites that did not report "process" data).

Some partial information on coverage can still be gleaned from Table A.3. Note, for example, that the sites providing process data reported a total enrollment of 29,272 participants. For these same sites we find only 12,733 cases in the participant file (plus 6,836 control cases). For these sites, the coverage estimate would be 12,733/29,272 or 43 percent. (It is, of course, a leap of faith to assume that this same percentage would apply to the sites that did not provide process data, but it is not inconsistent with the informal "guesstimates" made by ETS personnel who were familiar with the SAS data collection.)

Sample Attrition

Subsequent to the initial data gathering, a series of data collection steps were planned for each participant (and control) in the SAS data base. Interviews were to be conducted at program completion, the Job Knowledge and Attitudes battery was to be re-administered, subsequent survey interviews were to be conducted 3 months and 8 months after program completion, and data were to be gathered from employers, counselors, and so on.

In all longitudinal surveys, one expects some reduction in the numbers of respondents from whom data can be collected in each succeeding wave of data gathering. Such sample loss may compromise the representativeness of the remaining sample (save in the rare case when sample loss is effectively random). Such attrition, however, is a fact of life that social researchers have to live with. Respondents move and are untraceable, they lose their patience with the researchers' persistent inquiries, and so forth. Nonetheless, it is not unknown for well-conducted surveys to obtain responses from 80 percent (or more) of the original interviewees after a period of months (and even years). Systematic follow-up and dogged determination to find the "movers" and persuade the "refusers" have resulted in some remarkably low attrition rates in long-term follow-up studies, even with very youthful populations (see Sewell and Hauser, 1975, and descriptions of the Continuous Longitudinal Manpower Survey and National Longitudinal Survey in Appendix D).

Table A.4 shows the various stages of the SAS data collection and the attrition that occurred over time. It will be seen from Table A.4 that the attrition in the SAS data collection base is sufficiently high to engender skepticism about claims that the follow-up data provide reasonable estimates of the postprogram experiences of the youth from whom data were initially collected (not to mention the entire population of participants).[4]

Looking at the data base in its entirety (i.e., including all respondents from whom any data were collected) reveals that at 8 months after program completion, there is no interview data on the majority of program participants and controls (see Table A.4). Even at 3 months postprogram, the attrition losses amount to almost half of the original sample (45 percent of program participants and 49 percent of controls who provided initial data did not provide interview data at 3 months postprogram).

Sample attrition is clearly at a level at which serious doubts must arise about whether the results obtained from the follow-up samples can be generalized. Even for postprogram measurements, attrition rates are rather high: 32 percent of participants lack postprogram survey data.[5]

---

[4] In fact, sample attrition in the data base is higher than that reported in the ETS analyses. This difference in numbers arises because ETS eliminated approximately 11,000 cases from their published figures as a result of their "winnowing" of the sample to exclude "suspicious" data.

[5] It is possible that some portion of this "loss" may be attributable to youths who dropped out of the program (rather than "completers" for whom data are missing). If this is so, the situation may not be quite so bleak as it seems, since one could attempt to cast an analysis in terms of the effects of program completion (rather than mere enrollment in a YEDPA program).

TABLE A.4 SAS Data Collection Program: Instruments, Schedule, and Samples Obtained

Instrument	Administration Schedule	Population from Whom Data Collected	N Participants	 Controls
Individual Participant Profile section 1 (demographic and SES characteristics)[a]	Beginning of program	Participants and controls	34,572	15,610
STEP (reading test)	Beginning of program	Participants and controls	30,191	12,998
Pretest (7 knowledge and attitudinal measures)[a]	Beginning of program	Participants and controls	31,732	13,610
IPP section 2 (program termination data)	End of program	Participants	not available	--
Posttest (same as pretest)[a]	End of program	Participants and controls	24,580	9,314
Program completion survey (interview)	End of program	Participants	23,354	--
Counselor's rating	End of program	Program counselors of participants	22,232	--
Work supervisor's rating	End of program	Work supervisors of participants	11,068[b]	--
Control-Group Status Survey (interview)	End of program	Controls	--	6,471
Three-month follow-up survey (interview)[a]	Three months after end of program	Participants and controls	18,870	7,948
Three-month employer rating	Three months after end of program	Employers of participants and controls	2,341[b]	523[b]
Eight-month follow-up survey (interview)[a]	Eight months after end of program	Participants and controls	14,906	5,461
Eight-month employer rating	Eight months after end of program	Employers of participants and controls	2,023[b]	506[b]
Project and Process Information Questionnaire (data on program environment and processes)	Once during program operation	Program personnel	12,733[c]	6,836[c]

[a] Instruments for which N's are included in Figure A-1.

[b] Instrument not applicable to all respondents.

[c] N's shown are number of youths in sites who returned Process Information Questionnaire.

The magnitude of the attrition in the ETS data base makes one wonder why it was not anticipated either by the agency, the contractor, or the reviewers at the Office of Management and Budget (OMB) who were responsible for approving government data-gathering activities. We would note, in this regard, that in 1977 OMB announced an explicit standard for response rates, which (temporarily) replaced its non-numerical standard of adequacy (Office of Management and Budget, 1977):

> It is expected that data collections for statistical purposes will have a response rate of 75 percent. Proposed data collections having an expected response rate of less than 75 percent require a special justification. Statistical data collection activities having a response rate below 50 percent should be terminated. Proposed statistical data collections having an expected response rate of less than 50 percent will be disapproved.

Clearly, under such a standard, this data collection would not have been approved (or re-approved) if the attrition rates for its follow-up measurements had been accurately anticipated.

To illustrate the cumulative impact of the incompleteness of coverage discussed previously and the sample attrition that occurred over time in the SAS data base, Figure A.2 graphs an estimate of the size of the target sample of participants for the SAS data collection (using the 43 percent coverage rate computed for sites reporting process data) together with the sample sizes obtained for both participants and controls over the course of the data gathering. The effects of undercoverage and sample attrition are quite dramatic.

Because this sample attrition was so great we undertook some exploratory analyses to assess its effect on the composition of the SAS samples over time. Table A.5 presents tabulations of a variety of economic and social characteristics for respondents who provided interview data at entry and at 3 and 8 months postprogram. A few modest trends are evident from Table A.5. The proportion of high school dropouts declines from 25 to 20 percent, while the proportion of persons receiving public assistance shows a modest rise (42 to 47 percent for participants and 38 to 42 percent for controls). While there are notable changes and a very large number of "significant" differences (given the large sample sizes) between those who continued to provide data and those who were lost to attrition, it was surprising how modest the changes were. When a parallel analysis was performed on the Job Knowledge and Attitude measurements (see Table A.6), the results were equally unprovocative.

Reliability and Validity of Instruments

Job knowledge and attitude measures figure prominently in many of the evaluation studies conducted under YEDPA. The rationale behind the use of such instruments is that they measure traits that (1) the programs change and that (2) are important in helping youths find

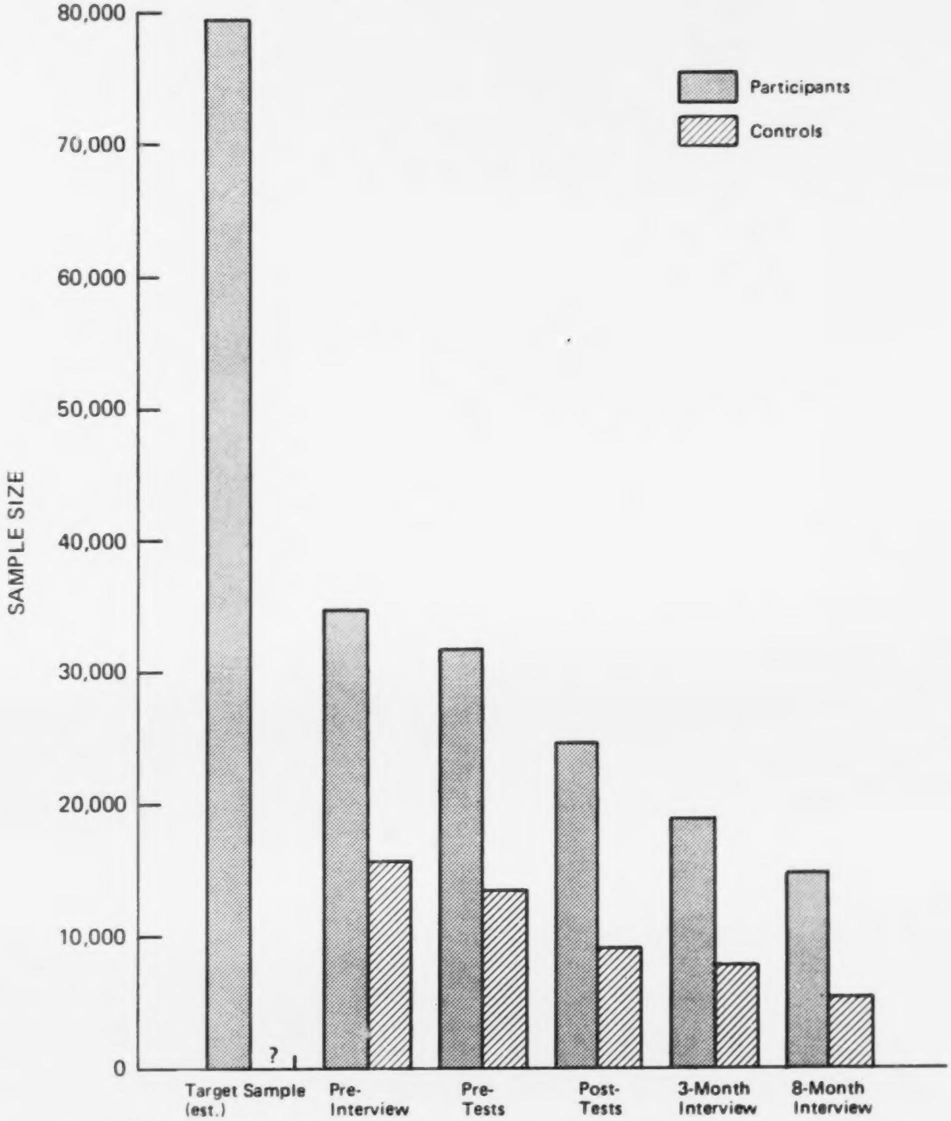


FIGURE A.2 Sample coverage and attrition (Standardized Assessment System).

employment. Since these are relatively inexpensive data to collect, there is some reason to favor such a strategy--particularly if one suspects that the effects of training on employment may be unusually subtle or delayed in arriving. This strategy, of course, depends on the measures being adequate in the sense of being replicable so that repeated measurements are relatively stable and in their being

TABLE A.5 Social and Demographic Characteristics of SAS Samples

		Stage		
Respondent Characteristic	Sample	Entry %	3-Month Follow-up %	8-Month Follow-up %
Female	Participant	51.9	54.3	54.6
	Control	51.1	52.5	53.2
High school dropout	Participant	25.5	21.6	20.5
	Control	25.4	24.5	20.4
Income 70% of standard	Participant	66.3	61.7	63.7
	Control	56.7	56.4	59.8
Welfare recipient	Participant	42.7	45.2	47.6
	Control	38.6	41.1	42.1
Race/ethnicity				
Black	Participant	56.2	58.5	58.1
	Control	53.4	55.2	54.5
Hispanic	Participant	21.9	22.4	23.1
	Control	26.7	29.2	29.1
White	Participant	19.5	16.8	17.0
	Control	17.7	14.3	15.2
Limited english	Participant	7.6	8.1	7.6
	Control	10.2	9.4	8.9
Has children	Participant	11.3	10.6	11.7
	Control	8.5	7.9	8.4
Criminal offender	Participant	8.2	6.7	7.1
	Control	11.5	10.0	12.0
Previous CETA participant	Participant	30.0	30.8	30.7
	Control	25.5	25.7	25.9

NOTE: Less than 1 percent of data records were inconsistent, e.g., the respondent was a "control" but the 3-month follow-up flag indicated the respondent had completed a "participant" follow-up survey. These records were excluded from this analysis.

SOURCE: Derived by tabulating data for every fifth record in ETS data base, i.e., 20 percent subsample of data base.

reasonable proxies for the more difficult to observe outcomes. The former condition is generally referred to under the rubric of reliability, the latter as validity (of one sort or another).

Since the Standardized Assessment System was launched with some expressed trepidations about the suitability of such measures to the YEDPA population, it is important to seek evidence within the data base as to whether these conditions are met by the SAS measurements. SAS provides the opportunity for making (test-retest) reliability estimates

TABLE A.6 Job Knowledge and Attitudes and Other Pretest Scores (at entry) of Respondents Giving Interviews at Entry and 3 and 8 Months Postprogram

SAS Measurement	Sample	Stage Entry	 3-Month Follow-up	 8-Month Follow-up	Standard Deviation of Scale
Vocational attitudes	Participant	20.5	20.5	20.4	
	Control	20.2	20.2	20.6	4.5
Job knowledge	Participant	21.6	21.8	21.6	
	Control	21.4	21.3	21.7	4.2
Job holding skills	Participant	30.4	30.6	30.5	
	Control	30.2	30.2	30.3	2.7
Work-related attitudes	Participant	40.8	48.2	48.1	
	Control	47.9	47.8	48.5	6.8
Job search skills	Participant	11.7	11.8	11.7	
	Control	11.5	11.3	11.7	3.2
Sex stereotyping	Participant	45.4	45.1	45.3	
	Control	45.0	44.6	45.0	8.2
Self-esteem	Participant	36.3	36.4	36.3	
	Control	35.9	35.9	36.2	3.2
Reading ability (STEP)	Participant	15.0	15.0	15.1	
	Control	14.5	14.6	14.9	4.6

NOTE: Standard deviation of scale is computed from data for all controls and participants.

SOURCE: Derived by tabulating data for every fifth record in ETS data base, i.e., 20 percent subsample.

for these scales, since the same battery was administered preprogram and postprogram to the untreated controls. Although one can expect true temporal change to affect the cross-temporal correlations between two measures of a trait such as self-esteem or work-related attitudes, one would expect a certain amount of stability in these traits. After all, if people varied widely from day to day on these traits it is not (easily) conceivable that the measure would be helpful in predicting relatively stable social behaviors, such as employment or other vocational behaviors.

A series of analyses reported in Tables A.7 through A.10 examine some of the properties of these scales. In Table A.7, the zero-order correlation of each scale measured preprogram and postprogram is

TABLE A.7 Test-Retest Reliability for SAS Measurements (computed from 20 percent sample of ETS data base)

SAS Measurement	Zero-Order Correlation Over Time[a]	
	Controls	Participants
Vocational attitudes	.604	.602
Job knowledge	.527	.505
Job holding skills	.460	.386
Work-related attitudes	.604	.610
Job search skills	.572	.538
Sex stereotyping	.631	.643
Self-esteem	.462	.388
(N)[b]	(1,644)	(4,443)

NOTES: Test-retest reliability will be affected by "true change" in respondents. Since participants are enrolled in programs designed to change their attitudes and knowledge, reliability estimates for this group should be treated with caution.

[a] Measurements made using identical instruments preprogram and postprogram.

[b] Minimum sizes of samples from which estimate was made.

TABLE A.8 Correlations Between Reading Scores and SAS Measurements of Job Attitudes and Knowledge (computed from 20 percent sample of ETS data base)

SAS Measurement[a]	Correlation with STEP Reading Score	
	Participant	Control
Vocational attitudes	.445	.509
Job knowledge	.447	.467
Job holding skill	.288	.354
Work-related attitudes	.446	.383
Job search skill	.569	.578
Sex stereotyping	.279	.241
(N)[b]	(5,603)	(2,258)

[a] All measurements made during pretest.

[b] Maximum sizes of samples upon which any reported correlation is based.

TABLE A.9 Zero-Order and Partial Correlations (with reading) between SAS Pretest Measurements (calculated from 20 percent sample of SAS data base)

SAS Measurement	Type of Correlation	SAS Measurement VA	JK	JHS	WRAI	JSS	SS	SE
Vocational attitudes (VA)	Zero-order	--	.427	.333	.564	.472	.312	.278
	Partial	--	.286	.242	.455	.297	.219	.184
Job knowledge (JK)	Zero-order	.405	--	.462	.440	.582	.224	.303
	Partial	.261	--	.394	.302	.449	.118	.213
Job holding skill (JHS)	Zero-order	.347	.431	--	.448	.443	.170	.402
	Partial	.240	.343	--	.376	.360	.101	.354
Work-related attitudes (WRAI)	Zero-order	.528	.419	.410	--	.496	.331	.442
	Partial	.416	.289	.317	--	.330	.241	.373
Job search skill (JSS)	Zero-order	.474	.545	.447	.490	--	.250	.368
	Partial	.299	.406	.339	.330	--	.119	.271
Sex stereotyping (SS)	Zero-order	.275	.198	.152	.287	.242	--	.138
	Partial	.189	.106	.078	.206	.127	--	.068
Self-esteem (SE)	Zero-order	.299	.319	.421	.446	.411	.152	--
	Partial	.179	.209	.353	.357	.287	.077	--

NOTE: All measurements are from 20 percent sample of ETS pretest data. Partial correlations control for STEP reading scale score. Step-wise case deletion was done (N = 2,196 controls and 5,464 participants). Correlations for program participants are shown above diagonal; those for controls are below.

TABLE A.10 Estimates of Predictive Validity of SAS Attitude and Knowledge Measurements (computed from 20 percent sample of ETS data base)

SAS Measurement at Program Completion	Sex	Correlation with Activity Status[a] 3 Months Postprogram	8 Months Postprogram
Vocational attitudes	Male	(.048)	(.056)
	Female	.078	(.042)
Job knowledge	Male	.085	(.042)
	Female	.057	(.042)
Job holding skills	Male	.111	.075
	Female	(.043)	(.031)
Job seeking skills	Male	.097	(.042)
	Female	.060	.055
Work-related attitudes	Male	.068	(.057)
	Female	.107	.082
Self-esteem	Male	.060	(-.003)
	Female	.092	(.043)
Sex stereotyping	Male	-.054	(-.029)
	Female	.050	(.013)
N	Male	1,080	714
	Female	1,326	935

NOTE: Estimated coefficients in parentheses are not reliably different from 0 (at $p < .05$). Correlations are derived from 20 percent subsample of YEDPA participants in ETS data base. Respondents were included only if they were coded as a participant in IPP profile and if the data flag for the 3-month follow-up indicated they had completed a participant follow-up survey (not a control survey). In a small number of cases (281 of 50,182), those two indicators are inconsistent; those cases were excluded from this analysis.

[a] Activity status is coded 1 if respondent is in a full-time job or is a full-time student; status is coded 0 otherwise.

reported for program participants and controls.[6] All of the test-retest correlations are within the range of approximately 0.4 to 0.6. While these correlations are not insubstantial, neither would they be thought to indicate an extremely robust measurement. Indeed, if one were to assume that measurement errors (both random and systematic) did not contaminate these data, these estimates would suggest a great deal of variation over time in young people's knowledge of and attitudes toward jobs, their self-esteem, and the extent to which they sex stereotype the occupational world. This could, of course, be the case. But it is also plausible that a relatively large component of measurement error may be distorting the measurements.

---

[6] Obviously, the reliability estimates for the control groups are most relevant since the controls did not participate in YEDPA's programs that were designed to change participant's attitudes, knowledge, behavior, and so forth. However, as Table A.7 shows, reliability estimates for program participants are quite similar to those for controls.

Overall, the self-esteem scale and the job-holding skill scale show relatively low cross-temporal correlations, while the sex stereotyping and vocational attitudes scales show correlations of 0.6 or better. (In the case of the sex stereotyping scale, one suspects that this relatively high estimate of reliability may derive, in part, from the fact that all items were presented in the same format and scored in the same direction.) These scales also show a high correlation with reading ability. Table A.8 presents the correlations between each of these scales (measured at pretest) and the STEP reading scale scores. These correlations range from a low of .241 for sex stereotyping to a high of .578 for the job search skill scale.

While one might be tempted to dismiss some of these high correlations with reading ability as "artifacts," for some purposes the correlation is as one would want. The ability to read a job advertisement is an essential component of "job search skills." It is not, however, the case that such a simple argument can be made to defend these correlations in every instance. There is no prima facie case to be made for a correlation between the attitude measures and reading--although there are more than enough plausible paths for indirect causation to account for this correlation. It is important to keep in mind that reading (and a myriad of other unmeasured traits) may play a role in accounting for the zero-order test-retest reliabilities. Potential correlated measurement errors also bedevil all attempts to understand test-retest reliabilities.

Some evidence of the construct validity of the various SAS measurements may be gleaned from Table A.9. As intended by the SAS designers, all of the measures are positively intercorrelated. This is true even when a simplistic attempt is made to account for confounding effects of reading ability on all of the scales. The strongest correlations found for the SAS measures are between scales that measure

---

It should be realized that test-retest correlations such as those shown in Table A.7 are affected by both true change in the respondents and by measurement errors. If one wishes to use measures like the SAS assessment battery as proxies for (unmeasurable) long-term outcomes (e.g., lifetime earning potential and employability), however, instability, per se, may be an important consideration. If a characteristic like work-related attitudes, for example, naturally varies to such a degree that test-retest correlations approach zero over a short period of time (in the absence of measurement error), then even a perfectly reliable measurement of this characteristic would be of doubtful utility in most program evaluations.

similar or related traits, e.g., vocational attitudes and work-related attitudes, or job search skills and job knowledge. Conversely, correlations between the sex role stereotyping measures and job knowledge factors are low.

Predictive Validity

Given the aim of the YEDPA programs, a key validity test for any scale would be its ability to predict which YEDPA youth would stay in school or find full-time employment and which would not. Several skirmishes have been made with this analysis and Table A.10 reports the simplest of them. (Its outcome, however, is little different from the more complicated analyses.)

For all program participants (in 20 percent sample) who provided the requisite data at 3 months (n = 2,406) and at 8 months (n = 1,649) postprogram, a score of 1 was assigned if (at follow-up) the respondent reported being either in school full time or working full time. A score of 0 was assigned otherwise. In the crudest analysis (reported in Table A.10) the 0-order correlation between this dichotomous "activity variable" and each of the scales from the SAS battery was calculated.[7] This was done separately for males and females to allow the effects of potential differences in child-care responsibilities to appear.

It will be seen from Table A.10, that there were some "significant" correlations between job knowledge and attitude scores and whether a youth was "occupied" or "unoccupied," however, the magnitude of these correlations was not substantial. The correlations for the SAS data base are considerably below those found for the NYC and OIC samples reported by ETS in their 1980 report on SAS (Educational Testing Service, 1980). They are even lower than the correlations (.10) reported by ETS from the Youth Career Development sample.

The extremely low predictive validity of the SAS measures raises questions about the meaningfulness of program evaluations that rest their verdicts of program effectiveness on such measurements. As Chapters 4 through 8 have shown, such studies are are not uncommon in the YEDPA literature.

Inter-site Variations

The shortcomings of the aggregate SAS data base invite the question: Is the data base uniformly riddled with such problems? It

---

[7] This analysis is somewhat crude, but it illustrates the point in a straightforward manner (and it is analogous to analyses reported in ETS, 1980). It should be noted, however, that because the criterion variable is dichotomous, the obtained correlations will understate somewhat the extent of the relationship.

TABLE A.11 Follow-up Rates for 10 Randomly Selected Sites in SAS Data Base

Postprogram Follow-up Stage[a]	Sample	Follow-up Rates				No Sample[b]
		0-24%	25-49%	50-74%	75+%	
3 months	Participants	1	3	2	4	--
	Controls	1	3	1	2	3
8 months	Participants	5	2	2	1	--
	Controls	4	2	1	0	3

NOTE: Ten sites were selected using a random number table from among all sites in the ETS data base having an "n" of at least 25 (controls + participants) at Wave 1. N's for samples whose rates are shown above range from 24 to 167.

[a] Follow-up rate is a percentage of all respondents at site for whom there is any 3-month (or 8-month) interview data (as indicated by "flags" set in the data base to indicate presence or absence of these data).

[b] Three sites had no control groups.

is possible in theory, of course, for an aggregate outcome such as the one reported here to be composed of some very fine data gathering operations and some very poor ones. While the aggregate result would not be impressive, it still might be possible to isolate a sizable subset of the data base upon which a convincing analysis could be performed.

To assay this possibility, we selected 10 sites at random from the SAS data base and ascertained the distribution of attrition rates across sites. We restricted the universe of potential sites for this analysis to sites that had a minimum of 25 respondents (controls and participants) at the initial data collection. For each of these sites, we then computed the follow-up rates at 3 and 8 months postprogram. The distribution of follow-up rates across the 10 sites is shown in Table A.11. It will be seen that at 3 months postprogram four sites had follow-up rates for participants of 75 percent or higher. For the control samples, only two sites had such high follow-up rates.

While the attrition analysis at 3 months is somewhat encouraging, the results at 8 months are quite disappointing. Only one site maintained a 75 percent follow-up rate for participants at 8 months, and no site attained this rate for its control samples.

In addition to the analysis of attrition rates, we also attempted to assay the distribution across sites of the predictive validity of the SAS attitude and knowledge measurements. Here again, we selected 10 sites at random from the SAS data base. This time, however, we restricted our analysis to sites that had a minimum of 100 program participants from whom data had been obtained at 3 months postprogram. This was done to provide an adequate sample size for calculating the correlation coefficients between the (immediate) postprogram SAS measurements and the participants' "activity status" at 3 months

TABLE A.12 Distribution of Predictive Validities of SAS Attitude and Knowledge Measurements For 10 Randomly Selected Sites

	Magnitude of Correlation with Activity Status at 3 Months Postprogram[a]						
SAS Measurement	-.20 to -.11	-.10 to -.01	0.00 to 0.09	.10 to .19	.20 to .29	.30+	Not Computable[b]
Vocational attitudes	0	1	5	2	1	0	1
Job knowledge	1	0	6	2	0	0	1
Job holding skills	0	0	5	4	0	0	1
Job seeking skills	1	1	2	4	1	0	1
Work-related attitudes	0	1	3	2	3	0	1
Self-esteem	0	1	3	4	1	0	1
Sex stereotyping	0	2	4	2	1	0	1
Summary Frequences	2	6	28	20	7	0	

NOTES: Ten sites were selected using a random number table from among the 66 sites in the ETS data base that had some 3-month interview data on at least 100 participants. N's for correlations within each site range from 70 to 186.

Respondents were included in this analysis only if they were coded as a program participant in IPP profile and if the data flag for the 3-month follow-up indicated they had completed a participant follow-up survey (not a control survey). In a small number of cases in the overall data base (281 of 50,182), these two indicators are inconsistent; these cases were excluded from this analysis. Attitude and knowledge scores are from postprogram measurement wave (i.e., "zero" months postprogram).

[a] As in Table A.10 the criterion being predicted is "activity status," which is coded 1 if respondent is in a full-time job or is a full-time student (it is coded 0 otherwise). Students enrolled in school at or below the tenth grade were excluded from the analysis since such students frequently have little discretion about their status as a result of compulsory education laws.

[b] One of the 10 randomly selected sites did not administer the SAS postprogram battery, and hence, correlations could not be computed for this site.

postprogram. Table A.12 presents the results of this analysis. (See the notes to Table A.12 for definitions of sample selection criteria and the activity status variable.)

It will be seen from Table A.12 that no predictive validity for any measurement at any site exceeded 0.30. The vast majority of correlations (48 of the 60 that could be calculated) were in the range 0.0 to 0.20. Indeed, over half of the coefficients we calculated (36 of 60) were less than 0.10.

While it would be a mistake to overgeneralize based on data from such a small number of sites, these data on attrition and measurement validity do not encourage the belief that there exist a sizable number of sites in the SAS data base that gathered high-quality data (where quality is indicated by the attrition of the sample and the predictive validity of the measurements).

REFERENCES

Educational Testing Service

1980 The Standardized Assessment System for Youth Demonstration Projects. Youth Knowledge Development Report No. 1.6. Washington, D.C.: U.S. Department of Labor.

1982 Demonstration Programs for Youth Employment and Training: The Evaluation of Various Categories of YEDPA Program Sites. Princeton, N.J.: Educational Testing Service.

Office of Management and Budget

1977 Memorandum to heads of executive departments, February 17, 1977.

Sewell, W., and R. Hauser

1975 Education, Occupation and Earnings. New York: Academic Press.

Taggart, R.

1980 Youth Knowledge Development: The Process and the Product. Unpublished manuscript.

APPENDIX

B

Report List

This appendix lists the reports considered by the committee in its assessment of program effectiveness and program implementation under the Youth Employment and Demonstration Projects Act (YEDPA). (See Chapter 4 for a description of the procedures and criteria used in selection of reports included in review of YEDPA programs.) The first section lists research reports on the effectiveness of individual YEDPA projects. The second section lists reports on the implementation of YEDPA programs in general.

For the review of program effectiveness only those project reports listed in the first section were considered. All of these reports met the committee's initial criteria for the effectiveness review. Upon more thorough examination many of these project reports were excluded from the effectiveness review because they did not meet the second-stage criteria of scientific evidence set by the committee. Project reports that did meet committee standards and were included in the review of program effectiveness (Chapters 5-8) are indicated by an "E" in the left margin.

For the review of program implementation the committee considered two types of reports: project reports (listed in the first section) that also contained information pertinent to program implementation, and reports on program implementation and operation that were not candidates for the effectiveness review because they were not specific to individual projects and because they lacked effectiveness data. Project reports of the first type included in the implementation review (Chapter 3) are indicated by an "I" in the left margin. Reports of the second type are listed in the second section, Implementation Reports. All of these reports are included in the implementation review.

Reports are listed alphabetically by authoring organization. Reports were prepared for the funding agency, the Employment and Training Administration of the U.S. Department of Labor, unless otherwise indicated. Many of the projects included here, for instance, were designed and managed by the Manpower Demonstration Research Corporation (MDRC) with the evaluation subcontracted to Abt Associates or Mathematica Policy Research. These project reports are listed respectively under Abt Associates or Mathematica Policy Research, with an indication that they were prepared for MDRC.

PROJECT REPORTS

Abt Associates, Inc., Boston

E 1979 Schooling and Work Among Youth from Low-Income Households: A Baseline Report from the Entitlement Demonstration. Prepared by S. Barclay, C. Bottom, G. Farkas, and E.W. Stromsdorfer, Abt Associates, Inc., and Randall J. Olsen, Yale University, for MDRC.

E 1980 Early Impacts from the Youth Entitlement Demonstration: Participation, Work, and Schooling. Prepared by G. Farkas, D.A. Smith, E.W. Stromsdorfer, and C. Bottom, Abt Associates, Inc., and Randall J. Olsen, Yale University, for MDRC.

E 1982 Impacts from the Youth Incentive Entitlement Pilot Projects: Participation, Work, and Schooling over the Full Program Period. Prepared by G. Farkas, D.A. Smith, E.W. Stromsdorfer, G. Trask, and R. Jerrett III, Abt Associates, Inc., for MDRC.

E 1983 Final Program Impacts of the Youth Incentive Entitlement Pilot Projects. Prepared by G. Farkas, R. Olsen, E.W. Stromsdorfer, L.C. Sharp, F. Skidmore, D.A. Smith, and S. Merrill for MDRC.

ACTION/Office of Voluntary Citizen Participation, Washington, D.C.

1981 Executive Summary to Final Report: Youth Employment Support Program.

1981 Final Report: Youth Employment Support Program (YES).

A.L. Nellum and Associates, Washington, D.C.

E 1980 Impacts of SYEP Participation on Work-Related Behavior and Attitudes of Disadvantaged Youth: Final Report.

Athletes for Better Education, Chicago

1982 Athletes for Better Education: Academic-Athletic-Counseling Project.

American Association of Community and Junior Colleges Washington, D.C.

n.d. The AACJC Education-Work Council Program: Second Year Report. Summary and Analysis.

1979 Community Education-Work Councils: The AACJC Project. Second Year Report.

American Camping Association, Port Deposit, Md.

1981 Project STAFF. Final Report.

American Institutes for Research in the Behavioral Sciences, Washington, D.C.

E 1982 Needs and Characteristics of Pregnant and Parenting Teens: The Baseline Report for Project Redirection. Prepared by D.F. Polit, with J.R. Kahn, C.A. Murray, and K.W. Smith for MDRC.

E 1983 School, Work and Family Planning: Interim Impacts in Project Redirection. Prepared by D.F. Polit, M.B. Tannen, and J.R. Kahn for MDRC.

Center for Employment and Income Studies, The Florence Heller Graduate School for Advanced Studies in Social Welfare, Brandeis University

E 1981 The Effectiveness of Two Job Search Assistance Programs for Disadvantaged Youth. Final Report. Prepared by A. Hahn and B. Friedman, with C. Rivera and R. Evans.

E 1982 Can Employer or Worker Subsidies Raise Youth Employment? An Evaluation of Two Financial Incentive Programs for Disadvantaged Youth. Final Report. Prepared by C. Rivera-Casale, B. Friedman, and R. Lerman.

Center for Labor and Human Resource Studies, Temple University

E 1981 Program Impacts of Jobs for Delaware's Graduates, Inc. Technical Report. Post-Program Experiences of 1980 Delaware High School Seniors Participating in the First Year of a School-to-Work Transition Program. Prepared by M.F. Eleey and R.D. Leone, with V. Singh.

E 1982 An Evaluation of the Program Effects of Jobs for Delaware Graduates, Inc. Post High School Labor Market Experiences of 1980 and 1981 Delaware High School Graduates Participating in a Special School-to-Work Transition Program. Prepared by M.F. Eleey and R.D. Leone, with K.M. Whitehouse and V. Singh.

E 1983 An Evaluation of the Program Effects of Project BEST. Educational Attainment and Post High School Labor Market Experiences of 1980 and 1981 High School Seniors after Participation in a Labor Market Information Pilot Program. Prepared by R.D. Leone and M.F. Eleey.

Center for Studies in Social Policy, McLean, Va.

E 1981 Evaluation of the OIC/A Career Exploration Project--1980. Final Report. Prepared by J.M. O'Malley, B. Bednarz Hampson, D.H. Holmes, A.M. Ellis, and F.J. Fannan, for Opportunities Industrialization Centers of America, Inc.

Center for Urban Programs, St. Louis University

1979 1978 Vocational Exploration Program. The Final Report.

1979 Vocational Exploration Demonstration Project: Operations Guidelines.

E 1980 Public Versus Private Sector Jobs Demonstration Project: An Analysis of In-Program Effects and Outcomes.

1980 The Vocational Exploration Demonstration Project: A Preliminary Analysis of the 1979 Fall Component. Prepared by B.P. Nedwek, J. Terence Manns, and E.A. Tomey.

1981 The Vocational Exploration Demonstration Project: An Analysis of the 1979-80 Academic Year Components. Prepared by B.P. Nedwek, J. Terence Manns, and E.A. Tomey.

1981 The Vocational Exploration Demonstration Project: An Analysis of the 1980 Summer Component. Prepared by B.P. Nedwek, J. Terence Manns, and E.A. Tomey.

1981 The Vocational Exploration Demonstration Project: An Analysis of the 1979-80 In-School Extension Components.

E 1981 Public Versus Private Sector Jobs Demonstration Project: Final Report. Prepared by J.F. Gilsinan and E.A. Tomey.

1982 Final Report: Part A. The Vocational Exploration Demonstration Project: An Analysis of the Long Term Impact of VEDP II.

1982 The Vocational Exploration Demonstration Project: An Analysis of the Eight Month Follow-up of Year One. Prepared by B.P. Nedwek, J. Terence Manns, and E.A. Tomey.

1982 The Vocational Exploration Demonstration Project: A Preliminary Analysis of VEDP II and Its Policy Implications.

City University of New York

E 1981 The Youth Incentive Entitlement Pilot Projects Demonstration: How Youths View the Program, An Attitudinal Study. Prepared by B. Joans, John Jay College of Criminal Justice, for MDRC.

I 1981 Final Evaluation Report on Oswego Youth Community Service. Prepared by M. Gittell, with M. Beardsley and M. Weissman.

I 1981 Final Evaluation Report on Syracuse Youth Community Service. Prepared by M. Gittell, with M. Beardsley and M. Weissman.

Clark, Phipps, Clark & Harris, Inc., New York

1979 Career Advancement Voucher Demonstration Project. Final Guidelines.

1980 Career Advancement Voucher Demonstration Project. The First Academic Year.

1981 Career Advancement Voucher Demonstration Project. Second Year Final Report.

CSR, Inc., Washington, D.C.

E 1981 Report on Impacts: Study of New Youth Initiatives In Apprenticeship. Prepared by G.D. Williams, E.P. Davin, B. Barrett, and J.M. Richards, Jr.

E 1981 Draft Phase II Report: Study of New Youth Initiatives in Apprenticeship.

E 1981 Study of New Youth Initiatives in Apprenticeship.

Dynamic Programs, Inc., Trenton, N.J.

I 1982 Career Exploration Program--Comparative Analyses, Program Participants and Matched Controls. Prepared by L. Mehl.

Educational Testing Service, Princeton, N.J.

E 1980 Assessment of the Youth Career Development Program for School-to-Work Transition: A Phase I Evaluation-Demonstration Study. Technical Report no. 2. Prepared by D.A. Rock and N.E. Freeberg.

E 1981 Eight Month Follow-up Evaluation of the Youth Career Development Program for School-to-Work Transition. An Addendum to ETS Technical Report no. 2. Prepared by D.A. Rock and N.E. Freeberg.

E 1981 Assessment of the U.S. Employment Service Project STEADY. Technical Report no. 9. Prepared by J. Grandy.

1981 Assessment of the National Football League Players Association Vocational Exploration Program (Unions for Youth), Summer 1979. Technical Report no. 4. Prepared by D.A. Trismen.

1981 Assessment of the National Football League Players Association Vocational Exploration Program (Unions for Youth), Summer 1980. Technical Report no. 17. Prepared by E.C. Driscoll.

E 1981 Assessment of the SER Career Exploration Program, Summer 1979. Technical Report no. 5. Prepared by D.A. Trismen.

E 1981 Evaluation of A Service Mix Alternatives Demonstration Program For Out-of-School Youth. Technical Report no. 7. Prepared by N.E. Freeberg and D.A. Rock.

E 1981 Assessment of the Bureau of Apprenticeship and Training (BAT) School/Work Linkage Projects. Technical Report no. 8. Prepared by J. Grandy.

1981 Assessment of the Graphic Communications Training Program Giant Step. Technical Report no. 10. Prepared by R.T. Murphy and L.R. Appel.

E 1981 Assessment of the National Puerto Rican Forum School to Work Program NPRD-STWP. Year 1. Technical Report no. 11. Prepared by R.T. Murphy and L.R. Appel.

1981 Assessment of the Health Opportunities/Positive Entry Program--Project HOPE. Phase I. Technical Report no. 12. Prepared by R.T. Murphy and L.R. Appel.

1981 Assessment of the National Urban League Summer Occupational Awareness Program 1979. Technical Report no. 6. Prepared by T.L. Hilton.

E 1981 Assessment of the SER Career Exploration Program, Summer 1980. Technical Report no. 13. Prepared by D. . Trismen and E.C. Driscoll.

I 1982 Assessment of the Corporate Career Demonstration Program. Technical Report no. 14. Prepared by D.A. Trismen.

1982 Assessment of the Junior Achievement Adaptation Demonstration Program. Technical Report no. 15. Prepared by D.A. Trismen.

1982 Assessment of the PUSH For Excellence, Inc. Career Exploration Demonstration Project. Technical Report no. 16. Prepared by T.L. Hilton.

E 1982 Assessment of the National Puerto Rican Forum Program 1980-1981. Technical Report no. 20. Prepared by D.A. Trismen.

1982 Assessment of the National Urban League Summer Occupational Awareness Program 1980. Technical Report no. 18. Prepared by T.L. Hilton.

E 1982 Evaluation of the Youth Career Development Program for School-to-Work Transition, Phase II: Replication with Junior and Senior High School Cohorts. Technical Report no. 19. Prepared by N.E. Freeberg and D.A. Rock.

1982 Assessment of the Green Thumb Youth Demonstration Program. Technical Report no. 21. Prepared by D.A. Trismen.

1982 Assessment of Six Youth Employment Programs: Rural Youth and Housing Partnership, Youth Agricultural Entrepreneurship, Economic Development through Community Improvement, Jobs for Youth, Second Chance, Assembly Youth Employment (National Association for Southern Poor). Technical Report no. 22. Prepared by D.A. Trismen.

1982 The Social Demography of Participants and Controls in Youth Employment and Demonstration Projects Act (YEDPA) Programs: Information Derived from the Standard Assessment System Data Base. Final Data Base Report no. 1. Technical Report no. 23. Prepared by L.F. Cole, J.M. Goodison, and D.A. Rock.

1982 Demonstration Programs for Youth Employment Training: The Evaluation of Various Categories of YEDPA Program Sites. Final Data Base Report no. 2. Technical Report no. 24. Prepared by D.A. Rock, N.E. Freeberg, D.A. Trismen, and J.M. Goodison.

1982 The Relationship between Program Processes and Employment Outcomes for YEDPA Youth. Final Data Base Report no. 3. Technical Report no. 25. Prepared by D.A. Rock, N.E. Freeberg, J.M. Goodison, and J. Pollack.

Graduate School for Community Development, San Diego

1981 Second Year and Final Report: Junior Achievement Adaptation Demonstration Project.

Greenleigh Associates

1981 Evaluation of HRDI-SYEP Program: 1980 Final Report.

Institute for Economic Development, Washington, D.C.

n.d. Electronic Industries Foundation JET Program. Final Report. Prepared by V.C. Knorr and S.L. Patton.

James H. Lowry and Associates, Chicago, Ill., and Washington, D.C.

1980 Research and Evaluation of the A. Philip Randolph Educational Fund Youth Employment Program: An Analysis of Factors Related to Participants Leaving School.

1980 Research and Evaluation of the A. Philip Randolph Educational Fund Youth Employment Program: An Analysis of Factors Related to Employment of YEP Participants.

Jobs for America's Graduates, Washington, D.C.

E 1983 Initial Employment and Earnings Impacts of JAG Programs Operating During the 1981-2 School Year. Prepared by A. Sum.

Manpower Demonstration Research Corporation (MDRC), New York

E 1979 The Youth Entitlement Demonstration Program: A Summary Report on the Start-Up Period of The Youth Incentive Entitlement Pilot Projects January-June, 1978.

E 1979 The Youth Entitlement Demonstration: An Interim Report on Program Implementation. Prepared by J. Ball, W. Diaz, J. Leiman, S. Mandel, and K. McNutt.

E 1979 A Preliminary Estimate of the Impact of Youth Entitlement on School Behavior. Prepared by S. Mandel and L. Solnick.

E 1980 The Youth Entitlement Demonstration: Second Interim Report on Program Implementation. Prepared by W. Diaz, J. Ball, N. Jacobs, L. Solnick, and A. Widman.

E 1981 The Participation of Private Businesses as Work Sponsors in the Youth Entitlement Demonstration. Prepared by J. Ball and C. Wolfhagen, with D. Gerould and L. Solnick.

E 1981 Project Redirection: Interim Report on Program Implementation. Prepared by A. Branch and J. Quint, with S. Mandel and S. Shuping Russell.

E 1981 The Supported Work Youth Variation: An Enriched Program for Young High School Drop-outs. Prepared by V. Semo Scharfman.

E 1982 Linking School and Work for Disadvantaged Youths: The YIEPP Demonstration: Final Implementation Report. Prepared by W.A. Diaz, J. Ball, and C. Wolfhagen, with J. Gueron, S. Sheber, and A. Widman.

E 1982 The Enrichment Program: Strengthening the School-Work Linkage in the Youth Incentive Entitlement Pilot Projects. Prepared by R. Ivry and C. Wolfhagen, MDRC, and C.E. Van Horn, Eagleton Institute of Politics, Rutgers University.

I 1982 Impacts From The Youth Incentive Entitlement Pilot Projects: Participation Work, And Schooling Over The Full Program Period. Prepared by G. Farkas, D.A. Smith, E.W. Stromsdorfer, G. Trask, and R. Jerrett III.

E 1983 Choices and Life Circumstances: An Ethnographic Study of Project Redirection Teens. Prepared by S. Brooks Levy, with W.J. Grinker.

E 1984 Post-Program Impacts of the Youth Incentive Entitlement Pilot Projects. Prepared by G. Farkas, R. Olsen, E.W. Stromsdorfer, L.C. Sharpe, F. Skidmore, D.A. Smith, and S. Merrill.

I 1984 Post-Program Impacts of The Youth Incentive Entitlement Pilot Projects. Prepared by G. Farkas, R. Olsen, E.W. Stromsdorfer, L.C. Sharpe, F. Skidmore, D.A. Smith, and S. Merrill.

I 1985 Final Impacts From Project Redirection: A Program For Pregnant And Parenting Teens. Prepared by D. Polit, J. Kahn, and D. Stevens.

Mark Battle Associates, Inc., Washington, D.C.

n.d. The Mixed Income Experiment: Statistical Analysis Report. Prepared for Educational Testing Service.

1979 Data Collection and Analysis Plan. Assessment of the Status and Results of Mixed Income Experiments.

1979 Guidelines and Operational Procedures for The Mixed Income Experiment.

1980 The Mixed Income Experiment. Report I: A Description of Program Participants.

I 1980 Appendix 1: Preliminary Case Studies, from Report I: Description of Program Participants, Mixed Income Experiment.

1980 The Mixed Income Experiment. Report II: Midprogram Progress Report.

I 1980 Revised Final Report Phase I: Assessment and Status of Mixed Income Testing.

1980 Technical Work Plan. Follow-up Survey of Participants in the Mixed Income Study.

1981 Executive Summary: The Mixed Income Experiment.

1981 Mixed Income Experiment Phase III Report I: Participant Status Three Months after Program Completion.

1981 Mixed Income Experiment Phase III Report II: Participant Status Eight Months after Program Completion.

1981 The Mixed Income Experiment. Report III: Test Results by Site.

1981 The Mixed Income Experiment. Report IV: Aggregate Analysis.

1981 The Mixed Income Experiment. Report V: Procedural Concerns in the Operation of the Multi-Site Study.

Marquette University, Educational Opportunity Program

n.d. *Upward Bound/CETA Demonstration Project: A Summary Report on First Year Findings*. Prepared by D. Franklin, M.K. Kinnick, and D.E. Mackenzie.

Mathematica Policy Research, Inc., Princeton, N.J.

I 1977 *Evaluation of the Economic Impact of the Job Corps Program: Interim Report Volume I*. Prepared by S. Kerachsky and C. Mallar.

E 1978 *Evaluation of the Economic Impact of the Job Corps Program*. First Follow-Up Report. Project Report 78-14. Prepared by C. Mallar, S. Kerachsky, C. Thornton, D. Long, T. Good, and P. Lapczynski.

E 1980 *The Impact of Supported Work on Young School Dropouts*. Prepared by R. Maynard for MDRC.

I 1980 *A Study of Youth Employment Programs and Demonstrations in Syracuse, New York. Preliminary Report*. Prepared by D. Zimmerman, J.R. Egan, and R. Ross.

E 1980 *A Study of the Value of Output of Participants in the Summer Youth Employment Program. Final Report Preliminary Draft*. Prepared by D. Zimmerman.

E 1980 *Evaluation of the Economic Impact of the Job Corps Program. Second Follow-Up Report*. Prepared by C. Mallar, S. Kerachsky, C. Thornton, M. Donihue, C. Jones, D. Long, E. Noggoh, and J. Schore.

I 1982 *Post-Program Impacts of Supported Work on Young School Dropouts: Results from a Follow-Up Survey*. Prepared by R. Maynard, E. Cavin, and J. Schore.

E 1982 *Post-Program Impacts of Supported Work on Young School Dropouts: Results from a Follow-up Survey*. Prepared by R. Maynard, E. Cavin, and J. Schore.

E 1982 *Evaluation of the Economic Impact of the Job Corps Program. Third Follow-Up Report*. Prepared by C. Mallar, S. Kerachsky, C. Thornton, and D. Long.

National Puerto Rican Forum, Inc., New York

E n.d. *School-To-Work Transition Program Annual Report, 1980-1981*.

National Urban League, Inc., New York

E 1980 *Public vs. Private Sector Jobs for Youth Demonstration Project. Final Report*. Prepared by J. Parsons.

Olympus Research Centers, Salt Lake City

E 1982 *Evaluation of Job Track: A Youth Job Search Demonstration*. Prepared by D.C. Roberts.

E 1982 *Getting Youth on the Job Track: A Description and Evaluation of a Job Search Training Program*. Prepared by M. Johnson, with D. Roberts.

Proaction Institute, East Lansing, Mich.

1982 *Appendix A: The French Landing Hydro Project Youth Employment Hydropower Redevelopment Project. Final Report*. Prepared by D. Freddolino, E. Perri, and B. Redman.

Public/Private Ventures, Corporation for, Philadelphia

E 1979 The Development of the Ventures in Community Improvement Demonstration: A Review and Analysis of the Process Through Which a Demonstration Project Was Mounted under the Youth Employment Demonstration Projects Act of 1977. Prepared by H.D. Shapiro and H. Blakely.

1980 New Career Pathways: Initial Research Report. Prepared by H.R. Arnold and G. Rubinow.

E 1980 The Ventures in Community Improvement Program (VICI): A Demonstration of Program Replication through the CETA System. Third Interim Research Report.

E 1982 Ventures in Community Improvement. Final Report of the Demonstration. Executive Summary.

E 1982 Ventures in Community Improvement. Final Report of the Demonstration.

1982 Final Report on Public/Private Ventures' Youth Entrepreneurship Initiative.

E 1982 The Impact of Pre-Employment Services on the Employment and Earnings of Disadvantaged Youth. Final Report.

E 1983 Longer Term Impacts of Pre-Employment Services on the Employment and Earnings of Disadvantaged Youth.

Resource Consultants, Inc. (RCI), McLean, Va.

E 1981 Special Project for Indochinese Youth. Final Results. Prepared by D. Gosselin and M. Papageorgiou.

RMC Research Corporation, Mountain View, Calif.

I 1979 Study of the Career Intern Program: Interim Report--Task A: Fidelity of Implementation. Prepared by P.G. Treadway, C.M. Foat, D.M. Fetterman, N.P. Stromquist, and G. Kasten Tallmadge for National Institute of Education.

I 1981 Study of the Career Intern Program: Summary Report. Prepared by G. Kasten Tallmadge, P.G. Treadway, and D.M. Fetterman.

I 1981 Study of Career Intern Program: Final Report-Task B: Assessment of Intern Outcomes. Prepared by G. Kasten Tallmadge and S.D. Yuen.

Recruitment and Training Program (R-T-P), Inc., New York

E 1982 Career Exploration Program. Final Report.

70001 Ltd., Washington, D.C.

E 1980 70001 Ltd. Replication Process Internal Evaluation. Final Report. Prepared by M.J. Moorhouse.

E 1983 70001 Ltd. Final Report to the U.S. Department of Labor.

Team Associates, Inc., Washington, D.C.

E 1982 Job Corps' Educational Improvement Effort: A Comprehensive Analysis.

E 1982 Job Corps' Educational Improvement Effort: Phase III Final Report. Prepared by B.J. Argento, K. Flaherty, D.M. Geller, and R. Thurman.

Texas Association of Developing Colleges, Dallas

I 1980 Evaluation of the Opportunities to Learn and Earn Project. Prepared by D.L. Ford and Associates.

University of Houston
I 1981 Corporate Career Demonstration Project. Executive Summary. Prepared by D.A. Sanders.
I 1981 Corporate Career Demonstration Project. Final Report.
University of Tennessee
1981 An Evaluation of the Summer Science Student Program: Cycle I Results for the San Juan, Mayaguez and Goodyear Atomic Sites. Prepared by K. Rasmussen Lounsbury, M.S. Weaver, and J.W. Lounsbury for Oak Ridge Associated Universities, Inc., and U.S. Department of Energy.
1982 An Evaluation of the Summer Science Student Program: Cycle II Results for the San Juan, Mayaguez and Goodyear Atomic Sites. Prepared by K. Rasmussen Lounsbury, M.S. Weaver, and J.W. Lounsbury for Oak Ridge Associated Universities, Inc., and U.S. Department of Energy.
Vera Institute of Justice, New York
E 1983 Alternative Youth Employment Strategies Project: An Evaluation. Special Summary. Prepared by S. Sadd, M. Kotkin, and S.R. Friedman.
E 1983 Alternative Youth Employment Strategies Project: Final Report. Prepared by S. Sadd, M. Kotkin, and S.R. Friedman.
Washington State Building & Construction Trades Council, Olympia
I 1982 Capacity Building Demonstration Project. Final Report. Prepared by R. Oilger.

IMPLEMENTATION REPORTS

Center for Labor Market Studies, Northeastern University
1980 Youth Knowledge Development Report (3.20), CETA Prime Sponsor Self-Reviews. Prepared by A. Sum, P. Harrington, and G. Schneider.
Center for Public Service, Brandeis University
1980 Youth Knowledge Development Report (8.6), Improving the Implementation of YEDPA Programs.
Office of Youth Programs, Employment and Training Administration, U.S. Department of Labor
1980 Youth Knowledge Development Report (12.2), Linkages Between Education and Employment and Training Systems--Volume I.
1980 Youth Knowledge Development Report (12.3), Linkages Between Education and Employment and Training Systems--Volume II.
1980 Youth Knowledge Development Report (12.5), Work-education Councils--Collaborative Approach.
National Collaboration for Youth National Assembly, Washington, D.C.
1980 Youth Knowledge Development Report (12.1), Linking with Voluntary Youth-Serving Agencies.
National Council on Employment Policy, Washington, D.C.
1980 An Anatomy of School-to-Work Transition Projects. Prepared by B. Dunn and R. Taggart.

1980 *Youth and the Local Employment Agenda: An Analysis of Prime Sponsor Experience Implementing the Youth Employment and Demonstration Projects Act*. Overview and Area Summaries Final Report. Prepared by G. Wurzburg.

1980 *Getting There: A Case Study Report on the Lives, Employment Preparation, and Prospects of YEDPA Participants*. Based on the Findings of the Youth Perspectives Project Conducted from November 1978-June 1979. Prepared by B. Snedeker.

1980 *Overview to the Local Focus on Youth: A Review of Prime Sponsor Experience Implementing the Youth Employment and Demonstration Projects Act*. Prepared by G. Wurzburg.

National League of Cities, Washington, D.C.

1960 Youth Knowledge Development Report (3.18), *CETA Youth Programs in Small Cities*.

Taggart, Robert

1980 *Youth Knowledge Development: The Process and the Product*. Unpublished paper.

APPENDIX
C
Implications of the Youth Employment Experience for Improving Applied Research and Evaluation Policy
Robert Boruch

> Try all things; hold fast that which is good.
> I Thessalonians 51:21

INTRODUCTION

Determining what is good is no easy matter. The purpose of this appendix is to capitalize on hard experience in making that judgment in one arena--employment and training programs supported by the federal government.

The program evaluations reviewed by the Committee on Youth Employment Programs have a variety of implications for evaluation policy. The aim of this appendix is to educe some of those implications. The committee also relied on earlier reviews of social and educational program evaluation generally (Riecken et al., 1974; Rivlin, 1971; Raizen and Rossi, 1981; the U.S. General Accounting Office, 1978; and others).

The discussion is concerned with obtaining better evidence with which to answer fundamental questions about youth employment and training programs:

- Who needs the services?
- How well are services delivered?
- What are the relative effects of the service?
- What are the relative benefits and costs of alternative services?

The implications are grouped into two simpler categories:

- Improving the design of outcome evaluations
- Improving reporting

Each implication is followed by a brief description of evidence and rationale.

Robert F. Boruch is professor of psychology, Center for Probability and Statistics, and director, Division of Methodology and Evaluation Research, Northwestern University.

IMPROVING THE DESIGN OF OUTCOME EVALUATIONS

Once said, it is obvious that quality in the design of an outcome evaluation affects the quality of the data and of conclusions. Poor designs can make programs look worse than they are, or better than they are, or yield uninterpretable evidence.

Quality and Evaluation Policy in General

Quality in evaluation design ought to be recognized and ought to be explicit in an agency's evaluation policy and in congressional oversight policy. Special efforts need to be made to improve the quality of research and evaluation designs for estimating the impact of youth employment projects. Existing professional guidelines can be used to influence the quality of design and the quality of reporting.

The theme of quality has been explicit in the Department of Labor's Knowledge Development Plan, insofar as the plan yoked the introduction of new programs to good evaluation design. That is, the plan recognized the legitimacy of the idea that good impact evaluations can only be done if conditions are controlled and evaluation is planned and begun at the start of a program. This theme appears also in the U.S. General Accounting Office's (1978) attention to competing explanations that characterize the results of poor research designs, to the elements of reasonable design, and to the need for designing the evaluation before a new program is put into the field.

The theme has been recognized by the courts in cases that recognize the shortcomings in some evaluation designs and the benefits of others, e.g., copayments in health insurance. Injunctions have been issued against poor designs, for example, and challenges to good designs have been defeated (Breger, 1983, for specific cases).

Despite this, the quality of evaluations of youth employment and training programs is still not sufficiently high. Less than 30 percent of the reports examined by this committee, for example, were of high enough quality to be reviewed seriously. Projects rejected for serious consideration by this committee were flawed by the lack of sensible comparison groups, unreliable measures of program outcome, vague objectives, and other shortcomings. Our acceptance rate is low, but it still represents progress. Rossi's (1969) review of 200 evaluations issued by the Office of Economic Opportunity before 1968, for example, uncovered no randomized field experiments and only about 25 reports with credible evidence.

Professional and institutional guidelines for improving the quality of evaluation designs are readily available. Section A of the bibliography lists guidelines that pertain to evaluation design and reporting in health and health services, education and training, welfare, and other areas. The references include applications of standards and assessments of their common features and usefulness. It would not be unreasonable to adopt variations on these in evaluation policy.

Randomized Field Experiments

Randomized field experiments should be explicitly authorized in law and encouraged in evaluation policy as a device for estimating the effects of new projects, program variations, and program components.

Randomized field tests of new programs, program components, or program variations are a scientifically credible device for obtaining interpretable evidence about a program's effects. But they are demanding with respect to the requirement that individuals or schools or other organizational units must be assigned randomly to program variations or to program versus control conditions.

The usefulness of randomized tests, in principle, is generally not at issue in professional discussions about estimating the impact of programs. That is, there is substantial agreement that when experiments are conducted properly, estimates of effects will be unbiased. The conditions under which experimental design can be or should be employed are more debatable, however (e.g., Cronbach and others, 1980; Boruch, 1975). How precedent, pilot tests, ethics, and law constrain or enhance feasibility is considered briefly below.

Precedent

Some opponents of controlled randomized tests maintain that randomized experiments are rarely feasible in field settings. The references in Section B of the bibliography constitute evidence against the claim: the reports listed cover some recent, high-quality experiments.

Randomized field tests have been undertaken, for example, to get at the effects of new law enforcement procedures (Sherman and Berk, 1984, 1985) and innovative methods for improving court efficiency (Partridge and Lind, 1983). They have been used to assess the relative benefits and costs of special health services delivery methods and practices, e.g., day care for the chronically ill and medical information systems. They have produced good evidence on the effects of diversion projects for delinquent youths in California, telephone conferencing in administrative law hearings in New Mexico, post-prison subsidy programs in Texas and Georgia, and nutrition education projects in Nebraska.

Not all attempts to use randomized field tests succeed, of course. The procedure may and indeed has been corrupted in medical experiments, e.g., early tests of the effects of enriched oxygen environments on retrolental fibroplasia (Silverman, 1977). And they have failed at times in formal efforts to evaluate court procedures, educational innovations, and other social programs (e.g., Conner, 1977).

Judging from precedent, however, it is not impossible to assign individuals or other units randomly to programs for the sake of fair estimates of program effects. Good randomized experiments have indeed been mounted. The reasons for successes and failures need to be studied.

Pilot Tests of Randomized Experiments

Precedent is persuasive in the crudest sense: It implies that what has been done might be done again. Still, experience with a randomized trial in one setting may be irrelevant in others.

For this reason, pilot tests of large-scale field experiments are worth considering. That is, small experiments prior to the main field experiment can provide evidence on feasibility that is more direct than what precedent can offer, can identify problems that otherwise could not be anticipated, and can help to resolve predictable problems before the main effort.

That there can be major problems in mounting randomized tests is clear from the Youth Employment Program experience (see Section C of the Bibliography). For instance, difficulties were encountered in the Tallmadge and Yuen evaluations of the Career Intern Program and the evaluation of the Career Advancement Voucher Demonstration (CAVD) program for low-income college students (Clark, Phipps, Clark & Harris, Inc., 1981; hereafter CPC&H). Some 30 randomized tests of Head Start programs were initiated in the late 1970s, despite counsel for pilot work: fewer than 10 succeeded. Randomized tests have also been unsuccessfully implemented in medicine, law enforcement, and other areas, because the randomization was corrupted.

That attempts to run good randomized trials in the youth employment sector were imperfect, or that other attempts have failed miserably, should not be unexpected. Imperfection and failure are our lot, just as improvement is.

The pilot test strategy has helped to ensure the quality of field experiments on telephone conferencing in the administrative court system. For instance, city tests served as a pilot for a statewide experiment in administrative appeals in New Mexico (Corsi and Hurley, 1979). The strategy has also been used to enhance quality in the youth employment program research. The Supported Work Experiments in five cities were preceded by a pilot effort in one city by the Vera Institute, and it did have a bearing on the quality of those experiments. The approach seems sensible in view of these efforts, the failed efforts, and experience from other areas. Hahn's (1984) advice in the industrial commercial sector is similar, for similar reasons.

Ethics

Where there is an oversupply of eligible recipients for scarce program services, randomized assignment of candidates for the resource seems fair. Vancouver's Crisis Intervention Program for youthful offenders, for instance, offered equal opportunity to eligible recipients. Since all participants could not be accommodated well with available program resources, but were all equally eligible, they were randomly assigned to program or control conditions.

More generally, randomized experiments are most likely to be regarded as ethical when the services are in short supply, their effectiveness is not clear, and someone is interested in effectiveness.

This rationale dovetails neatly with some managerial constraints. That is, despite the aspirations of program advocates, new programs cannot be emplaced all at once, but must be introduced in stages, e.g., services are delayed for some. The argument for the ethicality of random assignment to scarce resources is not especially pertinent when the manager can simply spread resources more thinly, e.g., by expanding the size of classes dedicated to special instruction in tests of training projects.

Law

Randomized field tests have received attention only recently from the courts and from constitutional scholars. The attention, however, has been thorough and productive.

Pertinent court decisions, for example, include Aguayo v. Richardson and California Welfare Rights Organizations v. Richardson. These cases challenged the use of randomized experiments in assessing welfare programs, but the challenges were dismissed by the court. Legal analyses of such cases are given by Breger (1983) and Teitelbaum (1983); Bermant et al. (1978), Federal Judicial Center (1983), and Rivlin and Timpane (1975) give more general treatments. Statutes that recognize the legitimacy of randomized experiments are scarce, however, and that is one reason for recommending explicit reference to randomized experiments in law.

The People Targeted for Services: Characteristics, Access, and Number

Surveys prior to mounting a field test are essential to ensure that people targeted for service or action are (a) identifiable, (b) trainable in the experimental regimen and (c) sufficient in number to warrant the investment in a controlled randomized experiment.

Program managers sometimes promise to randomize because they presume the target population is large enough to permit random assignment of individuals to "program" versus "control" conditions or to program variations. The presumption has been wrong at times in medical research, e.g., experiments in day care for the chronically ill during the late 1970s. It has also been wrong in educational research, notably in attempts to do randomized field experiments on Head Start preschool programs and in planned variations. And it has been wrong in manpower training programs prior to 1966, to judge from Rossi's (1969) description of the National Opinion Research Center's (NORC's) failure to recruit enough clients for experimental tests of an employment training program. If there are too few individuals in need of the service and who are accessible and willing to participate, one will be unable to execute an experiment well.

The reasons for error in the presumption include ignorance: It is often very hard to estimate the number of those in need of special services, harder to identify them, and at times harder still to understand how to train them in a program. They include greed, of course.

The funds made available for a special program and for an experiment produce inflated counts of those in need.

Regardless of the reasons for the error, the matter is important if we expect to have decent tests implemented. What do the youth employment experiments tell us about this?

For the Manpower Demonstration Research Corporation (MDRC), there seems to have been no remarkable problems in identifying and enrolling members of various target groups for the Supported Work Program. Still, MDRC says it may not have focused sufficiently well on the right target group in its explanation of why effects on youths fail to be substantial. Nor is there any reference to shortfall in the reports by the Vera Institute on the Alternative Youth Employment Strategies Project. The report on the Opportunities Industrialization Center (OIC) project (O'Malley et al., 1981) is ambiguous on this account.

In the CAVD program, on the other hand, "All CETA prime sponsors were to recruit a pool of at least 200 youths between the ages of sixteen and twenty-one who met YETP eligibility requirements and who desired and were available for full time work" (CPC&H, 1980:15). Some 150 to 170 were eventually assigned to alternative treatments. The target sample size was partly a function of local screening criteria. Recruitment and assignment difficulty is discussed in the report (CPC&H, 1980). Difficulty in recruitment was encountered in four of five sites. In three sites, the difficulty seems serious, said to be caused by internal organizational problems (e.g., a move to a different building) or interinstitutional problems (e.g., one agency doing the screening, another the program implementation).

Similarly, the Project STEADY evaluation reported that "sufficient numbers of youth were difficult to recruit" and that start-up time for the program was brief according to site directors (Grandy, 1981). The SPICY project for Indochinese youths was targeted for 120 youths per site, but obtained only 70 to 80 individuals. The Tallmadge and Yuen report on Career Education programs suggests that only three rather than four cohorts (with a projected 75 per cohort) were enrolled at each of the four sites. Further, the first two of the three cohorts contained fewer than the 75 members that were forecast (an extension of the period led to complete cohorts). Hahn and Friedman's evaluation of the Cambridge Job Factory for out-of-school youths encountered problems in recruitment because there were related summer programs in the same area. Their work in Wilkes-Barre suggests the enrollment problem was severe in that area (53 percent of target reached) and that it affected both the Youth Employment Service Program and the Employer-Voucher Program. The problem was attributed to competing CETA programs.

A few of the experiments at hand also tell us something about the tractability of problems in the target population. The Supported Work Program run by MDRC, for instance, suggests that women receiving Aid to Families with Dependent Children profit more than young people do from the services provided. It is not clear that "tractability" can be assessed well in prior surveys of a targeted group. The experience does suggest that it is important to separate ostensibly different subgroups in the experiment and to establish that their members can be identified well in prior surveys.

Sensitivity of Field Experiments

Statistical power analyses and reporting on the analyses are important and ought to be undertaken routinely. This is elemental quality assurance for any evaluation policy.

By power analysis here is meant formal calculation of the probability of finding an effect, if there indeed is an effect, despite a noisy context. Critical reviews of field experiments in health services, education, and other areas stress that (a) the effects of projects will usually be small and (b) sample sizes are often too small to detect those effects. That is, differences between program and control groups are likely to go undetected.

Three of the experiments reviewed by this committee had samples large enough to justify the expectation that an effect would be detected if indeed youths were influenced by the regimen. The Vera Institute's study, for example, involved 600 to 800 individuals per site, with about 300 in a control group and 100 in each of three program variation groups. OIC had about 1,500 participants and 700 controls distributed across seven sites. MDRC's sample size exceeded 1,200, over five sites.

Other experiments listed in Section C of the Bibliography involve far smaller samples, however. And so it is difficult to understand how a small project effect could be detected. The CAVD project, for example, involved assignment of fewer than 30 individuals per group in each site. Attrition led to even fewer, e.g., 4 individuals in a site in one analysis of dropouts. And so it is no surprise that differences among groups are often insignificant. The Indochinese SPICY project had 70 to 80 individuals per site in three sites and analyzed the sites separately. (They did detect effects.) Tallmadge-Yuen's Career Intern report suggests that there were, at most, 75 subjects per cohort per site; there is no reference to a power analysis in the final report, and results are mixed.

Measures of Program Implementation

More orderly, verifiable information on the degree of program implementation needs to be collected. Better, less-expensive methods for obtaining and reporting such information also need to be developed. And basic research needs to be conducted to link implementation data with impact data.

No outcome evaluation should exclude measurement of the level of program implementation. Such data are as essential in social program evaluation as measurements of dosage level and compliance are in evaluating new drugs and therapy.

At its crudest, measuring implementation may focus on structural features of the program's construction. This includes establishing the time frame required for actualizing major parts of program plans. Information about the time it takes for a new program to become stabilized, for instance, is often sketchy even for large-scale programs. Measurement should include crude observation on staff, material, and resources, and on the recipients of services and their eligibility.

See Rezmovic (1982), for instance, on tests of programs for former drug addicts.

It is also reasonable to expect such measurement efforts to document the way implementation is degraded. The Tallmadge and Yuen (1981:4) report, for example, stresses staffing problems at all four experimental sites, problems that are said to be attributable to "extremely compressed time schedules and bad timing associated with start up operations." Related reports cover actual program composition and the qualitative features of client and program interaction.

It seems sensible also to establish what kinds of services are offered to control group members. For they, too, may participate in other programs that are implemented to some degree. This measurement seems especially important insofar as 20 to 40 percent of control group youths in a given site may in fact avail themselves of services from other sources.

The problems of assuring that treatments are delivered as advertised, of measuring the degree of implementation, and of understanding how to couple implementation data and experimental data are not confined to the youth employment arena, of course. Poorly planned and executed programs occur in the commercial sector, though information about this is sparse for obvious reasons (see Hahn, 1984). Despite good planning, meteorological experiments have been imperfect and admirably well documented (Braham, 1979). Drug trials and other randomized clinical trials in medicine must often accommodate departures from protocol and noncompliance (e.g., Silverman, 1977). And so on.

"Evaluability"

The extent to which projects and programs are "evaluable" should be routinely established before large-scale evaluation is undertaken. Not all programs can be evaluated with the same level of certainty. New projects, for instance, often present better opportunities for obtaining interpretable estimates of project effects than ongoing ones. It is also clear that limitations on resources and experience prevent even new programs from being evaluated well.

The need to anticipate how well one might be able to evaluate has generated interest in the "evaluability" of programs. The idea of formal evaluability assessment, proposed by Joseph Wholey and extended by Leonard Rutman and others, involves addressing specific questions about whether an evaluation can be designed to provide useful information in a particular setting, especially whether decisions or changes can be made on the basis of the information. It has been suggested that the approach be employed before demanding evaluation in every instance.

Evaluability assessment has received some support and pilot testing in Canada and the United States (Wholey, 1977; Rutman, 1980). The strategy is imperfect in that it asks one to predict success based on experience that may not exist. But it is useful in identifying the senses in which evaluation is possible and potentially helpful. It is a promising device for avoiding unnecessary effort.

More to the point, the idea is to learn how to avoid putting money into evaluations that cannot be done well or are likely to be useless. More generally, the approach can provide a framework for understanding how to achieve compromises between the desirability of special designs, such as a randomized experiment, and operational constraints of the program, and for understanding the kinds of evaluation that will be useful.

Testing Components and Variations

Testing the components of programs is warranted, especially when tests of full programs are not feasible or appropriate.

No theory of evaluation demands that the effects of an entire program be estimated. Few practitioners would regard the requirement as reasonable. Yet rhetoric and legislative mandates foster this view, distracting attention from the possibility of testing important components of programs or variations on them. For example, one may find that running high-quality tests of an entire training program is not possible. But estimating the effect of alternative sources of information, ways of presenting information, ways of enhancing use of information, and so on, may be possible in small, high-quality experiments.

The strategy has been exploited in a few youth employment program evaluations, in research which preceded development of Sesame Street, and in experiments on surgical and health innovation. Incorporated into evaluation policy, the idea broadens options. And in the event of a major evaluation's failure, it is a device for assuring that at least parts of the program can be assayed well.

Attrition

Far better methods need to be invented and tested to control attrition and to understand its effects on analysis. Resources need to be dedicated to the activity.

Individuals who voluntarily participate in any social program are also free to abandon the program. Individuals who participate in a randomized control group or some alternative to which they have been randomly assigned--by answering questions about their work activity for instance--are also free to withdraw.

The loss of contact with individuals in either group is important insofar as it affects how easily and confidently one can interpret the results of an experiment. To put the matter simply, if contact is lost with individuals in both groups, there is no way to determine the project's impact on participants.

If the program maintains good contact with the participants, for instance, but fails to track nonparticipants well, it may generate evidence that makes the program look damaging when in fact it is ineffectual, or that makes the program appear effective when in fact its impact is negligible or even negative.

When the attrition rate in the program group differs appreciably from the rate in the control group, making inferences is more complicated. Suppose, for instance, that all individuals who "attrit" in the control group found jobs. Analysis that fails to recognize this would probably produce inflated estimates of the program's effect.

Problems in attrition in field experiments were sufficiently critical to warrant the committee's rejecting over half of them for serious review. This does not always imply that the work was unsalvageable, merely that resources do not permit determining if the analytic problems engendered by attrition could be resolved. CAVD's differential in rate of interviewing, for instance, is substantial, e.g., 80 percent for the participants and 50 percent for controls. There is no discussion of the potential problems. There is no attempt to accommodate them in the report at hand. The Vera Institute (Sadd et al., 1983:18), on the other hand, reported about equal rates of attrition, e.g., "premature dropout was substantial and depended on (program) model," but there are no details. Interview completion rates are given in the 60 to 84 percent range for the program group and in the 60 to 84 percent range for the control group.

The Tallmadge and Yuen study of the Career Intern Project is unusual in having tried to accommodate the possible biases due to differential attrition by matching individuals first and then keeping only full pairs for analysis. For all four sites, they got rates in the 50 to 70 percent range.

OIC does no formal analysis of the effect of attrition. Their report does, however, give completion rates and rates at which comparison groups have access to programs. They ignore these differences in their analysis or discard controls who did become involved in programs. Nothing is said about cooperation 3 and 8 months after program completion though they give data on each point.

The Project STEADY report is conscientious in providing a table that illustrates the flow and attrition rate at various stages in the experiment (Educational Testing Service, 1981:Table 1, p. 26). It is a shame, however, that no serious statistical/analytic attention was brought to bear on this.

Coupling Experiments to Longitudinal and Panel Studies

Randomized experiments ought to be coupled routinely to longitudinal surveys and panel studies. The purposes of this "satellite" policy include calibration of nonrandomized experiments, more generalizable randomized experiments, and better methods for estimating program effects.

Longitudinal surveys based on well-designed probability samples are clearly useful, for science and policy, in understanding how individuals (or institutions) change over time. For example, they avoid the logical traps that cross-sectional studies invite, such as overlooking cohort effects, in economic, psychological, and other research.

Such studies are, however, often pressed to produce evidence that they cannot support. Of special concern here is evidence on the impact of social programs on groups that the longitudinal study happens to include. So, for example, the Continuous Longitudinal Manpower Survey (CLMS) has been justified and supported primarily on grounds that one ought to understand what happens to the human resources pool. Its secondary or tertiary justification is that it can help one understand the effect of special programs--in youth employment, training, and so on.

Such justification may be useful for rhetorical and scientific purposes. But it is dysfunctional insofar as the claim is exaggerated. That is, longitudinal surveys are often not sufficient to permit confident estimation of the effect of programs designed to, say, affect earnings of individuals who happen to be members of the sample, crime rates of those people, and so on.

That the claims made for longitudinal surveys with respect to evaluation of programs can be misleading is clear empirically and analytically. The most dramatic recent empirical evidence stems from Fraker and Maynard's (1985) comparisons of program effects based on randomized experiments and effects based on nonrandomized data, notably the CLMS and the Current Population Survey. Earlier evidence in different arenas stems from the Salk polio vaccine trials, health services research, and others (see Boruch, 1975, for listing).

Randomized experiments, on the other hand, permit one to estimate the effects of projects with considerably more confidence. Indeed the committee report is emphatic on this account. A major shortcoming of experiments, one not shared by the large-scale longitudinal studies, is their limited generalizability. That is, a set of experiments might be feasible in only a half-dozen sites, sites that do not necessarily reflect national characteristics.

The implication is that one ought to invent and try out research policy that helps to couple the benefits of longitudinal studies, i.e., generalizability, with those of experiments, i.e., unbiased estimates of program effect.

This policy element is akin to science policy on satellite use. That is, the satellite, like the longitudinal study, requires enormous resources to emplace and maintain. It pays to capitalize on them. Further, the scientist who designs special-purpose studies can obtain access to part of the satellite to sustain his or her investigation. Just as the physicist then may use the satellite as a vehicle for limited, temporary investigation, the policy recommended here allows the researcher the option of using longitudinal infrastructure as a resource and as a vehicle for conducting prospective studies.

The policy element gets well beyond simple scientific traditions of "data sharing" (Committee on National Statistics, 1985). It is considerably more debatable and more important in principle. Access is likely to be feasible, for example, only for a few projects, perhaps only one every year or two, because of the sheer difficulty of coupling studies to an already complex longitudinal enterprise.

Theory: Amateur and Otherwise

The theories underlying programs are often puny at best and fragmented and poorly articulated at worst. They need to be strengthened and coupled to evaluation design. Resources have to be dedicated to the effort.

Even in the engineering sciences, elements of theory are at times weak and ambiguous. And applications of well-explored theory, e.g., classical mechanics and the conflation of several complex theories or laws operating in a complex environment, may lead to analytic problems that are intractable. And so, it is not uncommon to design randomized experiments to assess changes in chemical production processes, acoustics, and other areas (e.g., Hahn, 1984).

The same problems occur in the social sector of course, in spades. Moreover, the science is young so good theories are not in abundant supply. Indeed, the absence of formal, well-explicated theory is a justification for randomized trials in the social sector, just as experiments are sometimes a last ditch effort to achieve understanding in the engineering arena.

To be sure, commonsense notions of how a program is supposed to produce an effect is theory of sorts. Most aphorisms are prescriptive theories. But such theory is not accurate simply by virtue of experience, its amateur status, or the desirability of results that the theory-based program is supposed to produce. Which means the theory and the program based on it may also be inaccurate.

Examples of inadequate commonsense theory and of well-articulated theory are easy to find. There is room for improving both varieties in different ways. One of the ways, for Chen and Rossi (1980) is to let the theorist, rather than only the program administrator, choose outcome variables that are likely to be influenced by what the program is supposed to do. The administrator may believe that program will affect salaries, for example. But the theorist may recognize that, in the time available, salary changes may be undetectable and instead one ought to measure more immediate, plausibly expected effects on, say, skill or knowledge level. The benefit is enhancing the likelihood of detecting some effect, in the short run, and theory enhancement, in the long run.

The need for enlarging the supply of good theory seems obvious. To take a simple variable such as time, for instance, few formal social or behavioral theories have been laid out (partly because experience is sparse) to explain the time required for a new project's stabilization, time required on tasks to produce effects on skills, time required to benefit through skills in the market place, or time involved in the decay of benefits. Yet theory that incorporates time variables seems essential to designing, executing, and evaluating programs well.

More complicated examples are not hard to develop. For example, so-called selection models have been developed by Heckman and Robb (1985), among others, to describe analytically how program applicants wind up in one program regimen versus another. The approach seems sensible insofar as it leads to a substitute for experiments and better analyses of nonrandomized trials.

Such models are in fact small theories and they have the merit of being explicit and often ingenious. Their shortcomings lie in their parochialism: each is a notion developed by a mathematically oriented analyst, who is unlikely to have (a) come within sniffing distance of a real program, i.e., not done empirical studies of the enrollment process and (b) taken the trouble to exploit theory from disciplines outside economics.

For example, it takes no wit to recognize that enrollment processes involve information, supplied to and available to administrator and applicant, and decisions by each. The information is processed under constraints; the decisions are made under constraints. Why then do we not exploit, say, the theories and rules of cognitive processing that have been developed over the past 10 years by Herbert Simon, Kahneman and Tversky, and others to develop something more realistic and more coherent than the simplistic selection models that the ill-informed analyst might choose? The reason seems to lie more in disciplinary provincialism than in any inherent weaknesses in either kind of model.

The point is that far more integration of theory and practical program development and evaluation is warranted. Absent the integration, it is doubtful that one will learn much that is durable.

IMPROVING THE QUALITY AND INTERPRETABILITY OF EVALUATION REPORTS

The quality of evaluation reporting can be improved substantially by adhering to professional guidelines issued over the past five years.

Documentation on large-scale evaluations is generally much better than the information usually available on smaller, locally managed ones. Nonetheless, there are notable gaps in what is known about even the large ones. Information is not always presented in accord with reasonable reporting standards issued, for example, by the Evaluation Research Society (1982), the U.S. General Accounting Office (1970), and other organizations, and by individual experts, such as Mosteller et al. (1980) (in clinical trials section of the bibliography).

The weaknesses in reporting make it difficult to screen and summarize results for policy, as this committee has tried to do. And the weaknesses complicate efforts to develop quantitative syntheses of multiple experiments so we may judge how sizes of program effect vary. [See Light and Pillemer (1984) and Cordray and Orwin (1985) on synthesis and the problems that poor reporting engenders.]

Doubtless some good projects have been ignored because reporting is poor. Good projects are not exploited as much as they should be because information provided in reports is insufficient.

So, for example, the best reports tell us what the attrition rate is from programs or from program versus control groups. But many reports do not. The best of the best educe the implications of attrition and how they have been taken into account to produce fair estimates of program effect. Most do not. The gaps make it very difficult to review the quality of evaluations and to adjust for quality of evaluation in gauging the success of multiple programs.

The topics that should be routinely considered in such reports are easy to list. The following are based on fuller treatments in the references cited.

Attrition Rates

The difference between the ultimate target samples of program participants and control-group members is crucial. Estimates of program effect may be inflated, deflated, or remain unchanged, relative to their true value, depending on the magnitude of attrition in the groups.

Yet attrition rates are sometimes not reported. Nor are differences reported. Even less frequently reported are analyses of how sensitive the conclusions are to the rates and to differences in the rates.

Character of Program

Understanding what happens in a program is, of course, important; developing orderly, inexpensive descriptions of what happens is difficult. This does not excuse one from trying to document program activity well. Little reporting has been undertaken, partly perhaps because of a lack of understanding of how to measure the level of program implementation well.

Access to the Data Base

Assuring that raw research data are accessible for reanalysis, in the interest of facilitating criticism and secondary analysis, is not common. Still, it seems sensible to advance understanding of how to exploit costly information better and how to encourage thoughtful criticism (see Fienberg et al., 1985). The implication for research policy in this arena is that reports should routinely inform the reader about what raw data are available and from whom.

The vehicles for assuring the data that are available include the normal contract system and agencies responsible for overseeing evaluations.

Target Population/Recruitment

The general characteristics of youths targeted for programs are usually a matter of law or regulation and are usually reported. Demographic characteristics of the sample are also reported.

But how youths are recruited, what fraction of the available population is involved, and what kinds of problems were encountered in targeting are often not reported or given only superficial treatment. As a consequence, it would be difficult to replicate the program even if it were found to be successful. And it is difficult for the thoughtful observer to reconcile conflicts among the results of different studies.

Perhaps most important, shortfalls between target and actual samples occurred. Understanding the magnitude of the shortfall and the reasons for it are crucial to designing better evaluations.

Site Selection

Many of the field tests of youth employment programs involve multiple sites. The 9 randomized trials reviewed seriously by the committee, for example, involve a randomized experiment in each of 40 sites.

Very little information is provided on site selection in final reports, however. The information is important for understanding the general context of the test, perhaps for understanding why the program succeeded or failed and why the evaluation was executed poorly or well, and for learning whether and how the evaluation might be replicated.

Final results need not provide great detail on site selection. Nonetheless, a reference, footnote, or paragraph ought to provide leads to accessible sources of written information on the topic.

Random Assignment

The specific method for randomly assigning individuals to alternative regimens is rarely reported. The methods may be mundane. Or they may be creative in the sense of being robust against indifference, incompetence, and corruption. In any case, reporting on method is warranted in a footnote or appendix to assure the reader that indeed the study was carried out as an experiment and to permit praise and criticism of the random assignment process [see Dobson and Cook (1979)].

For example, the specific mechanics of randomization are not described in any final report on youth employment projects listed in Section C of the Bibliography. There are no citations to reports that may contain the information.

But broad information is given by some. The Tallmadge and Yuen report on the Career Intern Program, for instance, gives no detail except to say that assignment was by "lottery." The report on the OIC project (O'Malley et al., 1981:34) says that individuals were randomly assigned to program versus control groups but that "there's no firm assurance that in all cases the participants were randomly assigned."

The "most" detail on the topic is given in the final report for Project STEADY. Grandy (1981:17) reports that "Project STEADY participants consisted of random samples of program applicants. Site directors reported that all applicants drew a card from a hat, and on that card was the designation of participant or control." The randomization followed administration of tests and screening that determined eligibility and individuals' willingness to participate in the program.

Failure to report such crucial information is not confined to the youth employment reports. In their review of medical research journal articles, such as the New England Journal of Medicine, for example, Der

Simmons et al. found that only one-fifth reported anything on method of randomization.

Statistical Power Analyses

It is rare for final reports to specify the probability of finding program effects, if indeed they exist, given the sample size and other design parameters. It seems especially desirable that evaluations showing "no effects" report the statistical power of the analysis. Even when effects are found, the power calculations should be available for postevaluation analyses, e.g., was the size of effect obtained close to the effect guessed in the power analysis.

Costs

Information on the costs of an evaluation, apart from the cost of the program under examination, is almost never published in professional journals or in final reports of evaluations. In consequence, it is difficult to estimate what has been spent on evaluation and impossible to do good benefit/cost analyses of evaluations based on evidence. There is no readily accessible evidence.

It seems desirable, then, to have information on costs in the report. No uniform system for reporting costs of elements of evaluation has been adopted. And so creation of alternative accounting systems for budgets and expenditures is warranted.

Graphs and Tables

Tables in some evaluation reports are often dreadful, difficult to understand, and impossible to read quickly. And they are often susceptible to misreading. Only a few reports on youth employment experiments are exceptional on this account. So, for example, computer printouts of tables are merely reprinted, rather than being reorganized and restructured to permit the reader to understand patterns quickly.

The state of the art in constructing tables and graphs has improved remarkably over the past 10 years. It is a shame that it is ignored. See Fienberg (1979) and Kruskal (1980), among others, on improving these presentations.

REFERENCES AND BIBLIOGRAPHY

Bermant, G., H.C. Kelman, and D.P. Warwick
1978 The Ethics of Social Experimentation. New York: Wiley.
Boruch, R.F.
1975 Coupling randomized experiments and approximations to experiments in social program evaluation. Sociological Methods and Research 4(1):31-53.

1976 On common contentions about randomized experiment. Pp. 158-194 in G.V. Glass, ed., *Evaluation Studies Review Annual*, Vol. 3. Beverly Hills, Calif.: Sage Publications.

Boruch, R.F., and P.M. Wortman

1979 Some implications of educational evaluation for evaluation policy and program development. *Review of Research in Education* 7:309-361.

Boruch, R.F., D.S. Cordray, and G. Pion

1982 How well are local evaluations carried out? In L.E. Datta, ed., *Local, State, and Federal Evaluation*. Beverly Hills, Calif.: Sage Publications.

Boruch, R.F., A.J. McSweeny, and E.J. Soderstrom

1978 Bibliography: illustrative randomized field experiments. *Evaluation Quarterly* 4:655-695.

Boruch, R.F., P.S. Anderson, D.M. Rindskopf, I.A. Amidjaya, amd D. Jansson

1979 Randomized experiments for evaluating and planning local programs: a summary on appropriateness and feasibility. *Public Administration Review* 39(1):36-40.

Braham, R.E.

1979 Field experimentation in weather modification. *Journal of the American Statistical Association* 74(365):57-104.

Breger, M.J.

1983 Randomized social experiments and the law. Pp. 97-144 in R.F. Boruch and J.S. Cecil, eds., *Solutions to Ethical and Legal Problems in Social Research*. New York: Academic Press.

Chen, H-T., and P.H. Rossi

1980 The multigoal, theory driven approach to evaluation: a model linking basic and applied social science. *Social Forces* 59(1):106-122.

Clark, Phipps, Clark & Harris, Inc.

1980 *Advanced Education and Training--Interim Report on the Career Advancement Voucher Demonstration*. Youth Knowledge Development Report No. 5.3. Washington, D.C.: U.S. Department of Labor, Employment and Training Administration.

1981 Second Year Final Report: *Career Advancement Voucher Demonstration Project*. New York: Clark, Phipps, Clark & Harris, Inc.

Conner, R.F.

1977 Selecting a control group: an analysis of the randomization process in twelve social reform programs. *Evaluation Quarterly* 1:195-244.

1982 Random assignment of clients in social experimentation. In J.E. Sieber, ed., *The Ethics of Social Research: Surveys and Experiments*. New York: Springer Verlag.

Cordray, D.S., and R.G. Orwin

1985 Effects of deficient reporting on meta analysis: a conceptual framework and reanalysis. *Psychological Bulletin* 97(1):134-147.

Corsi, J.R.

1983 Randomization and consent in the New Mexico teleconferencing experiment: legal and ethical considerations. Pp. 159-170 in R.F. Boruch and J.S. Cecil, eds., *Solutions to Ethical and Legal Problems in Social Research*. New York: Academic Press.

Corsi, J.R., and T.L. Hurley
1979 Pilot study report on the use of the telephone in administrative fair hearings. *Administrative Law Review* 31(4):484-524.

Cronbach, L.J., S.R. Ambron, S.M. Dornbusch, R.D. Hess, R.C. Hornik, D.C. Phillips, D.F. Walker, and S.S. Weiner
1980 *Toward Reform of Program Evaluation*. San Francisco, Calif.: Jossey-Bass.

Dobson, L.D., and T.D. Cook
1979 Implementing random assignment in a field setting: a computer based approach. *Evaluation Quarterly* 3:472-478.

Educational Testing Service
1981 *Assessment of the U.S. Employment Service Project STEADY*. Technical Report no. 9. Prepared by J. Grandy.

Evaluation Research Society
1982 Standards for evaluation practice. *New Directions for Program Evaluation*. No. 15.

Federal Judicial Center
1983 *Social Experimentation and the Law*. Washington, D.C.: Federal Judicial Center.

Fienberg, S.E.
1979 Graphical methods in statistics. *American Statistician* 33(4):165-178.

Fienberg, Stephen E., Margaret E. Martin, and Miron L. Staf, eds.
1985 *Sharing Research Data*. Committee on National Statistics. Washington, D.C.: National Academy Press.

Fisher, R.A.
1966 *Design of Experiments*. (First edition, London: Oliver and Boyd, 1935.) Eighth edition. New York: Hafner.

Fraker, T., and R. Maynard
1985 *The Use of Comparison Group Designs in Evaluations of Employment Related Programs*. Princeton, N.J.: Mathematica Policy Research.

Freeman, H.E., and P.H. Rossi
1981 Social experiments. *Milbank Memorial Fund Quarterly: Health and Society* 59(3):340-374.

Grandy, J.
1981 Assessment of the U.S. Employment Service Project STEADY. Technical Report No. 9, prepared under contract to the U.S. Department of Labor, Office of Youth Programs. Princeton, N.J.: Educational Testing Service.

Hahn, G.J.
1984 Experimental design in the complex world. *Technometrics* 26(1):19-31.

Heckman, J. and R. Robb
1985 Alternative methods for evaluating the impact of interventions: an overview. Presented at the Social Science Research Council Workshops on Backtranslation, Committee on Comparative Evaluation of Longitudinal Surveys, New York.

Kruskal, W.H.
1980 *Criteria for Judging Statistical Graphics*. Unpublished manuscript. University of Chicago, Department of Statistics.

Light, R.J., and D.B. Pillemer
1984 Summing Up: The Science of Reviewing Research. Cambridge, Mass.: Harvard University Press.

Lipsey, M.W., D.S. Cordray, and D.E. Berger
1981 Evaluation of a juvenile diversion program: using multiple lines of evidence. Evaluation Review 5(3):283-306.

O'Malley, J.M., B.B. Hampson, D.H. Holmes, A.M. Ellis, and F.J. Fannau
1981 Evaluation of the OIC/A Career Exploration Project--1980. McLean, Va.: Center for Studies in Social Policy.

Patridge, A., and A. Lind
1983 A Reevaluation of the Civil Appeals Management Plan. Washington, D.C.: Federal Judicial Center.

Raizen, S.A., and P.H. Rossi
1981 Program Evaluation in Education: When? How? To What Ends? Report of the Committee on Program Evaluation in Education. Washington, D.C.: National Academy of Sciences.

Rezmovic, E.L.
1982 Program implementation and evaluation results: a reexamination of Type III error in a field experiment. Evaluation and Program Planning 5:111-118.

Riecken, H.W., and others
1974 Social Experimentation. New York: Academic Press.

Rivlin, A.M.
1971 Systematic Thinking for Social Action. Washington, D.C.: The Brookings Institution.

Rivlin, A.M., and P.M. Timpane, eds.
1975 Ethical and Legal Issues of Social Experimentation. Washington, D.C.: The Brookings Institution.

Rossi, P.H.
1969 Practice, method, and theory in evaluating social action programs. Pp. 217-234 in D.P. Moynihan, ed., On Understanding Poverty. New York: Basic Books.

Rutman, L.
1980 Planning Useful Evaluations: Evaluability Assessment. Beverly Hills, Calif.: Sage Publications.

Sadd, S., M. Kotkin, and S.R. Friedman
1983 Alternative Youth Employment Strategies Project. New York: Vera Institute of Justice.

Sherman, L.W., and R.A. Berk
1984 The specific deterrent effects of arrest for domestic assault. American Sociological Review 49:261-272.

Silverman, W.A.
1977 The lesson of retrolental fibroplasia. Scientific American 236(6):100-107.

Tallmadge, G.K., and S.D. Yuen
1981 Study of the Career Intern Program. Final Report--Task B: Assessment of Intern Outcomes. Prepared for the National Institute of Education. Mountain View, Calif.: RMC Research Corporation.

Teitelbaum, L.E.
1983 Spurious tractable and intractable legal problems: a positivist approach to law and social science research. In R.F. Boruch and J.S. Cecil, eds., Solutions to Ethical and Legal Problems in Social Research. New York: Academic Press.

U.S. General Accounting Office
1978 Assessing Social Program Impact Evaluations: A Checklist Approach. Washington, D.C.: U.S. General Accounting Office.

Wholey, J.
1977 Evaluability assessment. In L. Rutman, ed., Evaluation Research. Beverly Hills, Calif.: Sage Publications.

BIBLIOGRAPHY

Guidelines, Standards, and Related Papers on Appraising the Quality of Social Program and Project Evaluations

The guidelines issued by the Evaluation Research Society, the U.S. General Accounting Office, and other institutions are marked with an asterisk(*). Papers by individual scholars (and one journalist) provide commentary, applications, comparisons among standards or ideas for new standards.

Bernstein, I.N., and H.E. Freeman. 1975. Academic and Entrepreneurial Research. New York: Russell Sage Foundation.

Chalmers, T.C. 1981. A method for assessing the quality of a randomized control trial. Controlled Clinical Trials 2:31-49.

Cordray, D.S. 1982. An assessment of the utility of the ERS standards. New Directions for Program Evaluation No. 15:67-82.

Davis, H.R., C. Windle, and S.S. Sharfstein. 1977. Developing guidelines for program evaluation capability in Community Mental Health Centers. Evaluation 4:25-34.

DerSimmons, R., L.J. Charette, B. McPeek, and F. Mosteller. 1982. Reporting on methods for clinical trials. New England Journal of Medicine 306(22):1332-1337.

Gordon, G., and E.V. Morse. 1975. Evaluation research. In A. Inkeles, ed., Annual Review of Sociology 1.

*Joint Committee on Standards. 1981. Standards for Evaluations of Programs, Projects and Materials. New York: McGraw-Hill.

McTavish, D.G., J.D. Cleary, E.E. Brent, L. Perman, and K.R. Knudsen. 1977. Assessing research methodology: the structure of professional assessments of methodology. Sociological Methods and Research 6(1):3-44.

Mosteller, F.M., S.P. Gilbert, and B. McPeek. 1980. Reporting standards and research strategies: agenda for an editor. Controlled Clinical Trials 1(1):37-58.

*National Institute of Education, Department of Education. 1977. The Joint Dissemination Review Panel Ideabook. Washington, D.C.: National Institute of Education.

Pear, R. 1984. Taking the measure, or mismeasure, of it all. *The New York Times*, August 28.

*Rossi, P., ed. 1982. Standards for evaluation practice. *New Directions for Program Evaluation* No. 15.

*U.S. General Accounting Office. 1975. *Evaluation and Analysis to Support Decisionmaking*. Washington, D.C.: U.S. General Accounting Office.

*U.S. General Accounting Office. 1978. *Assessing Social Program Impact Evaluations: A Checklist Approach*. Washington, D.C.: U.S. General Accounting Office.

Illustrative, Recent Randomized Field Experiments in Law Enforcement and Corrections, Welfare, Court Procedures, Health Services, and Other Areas

For a list of over 300 field experiments run before 1979, see Boruch, McSweeny, Soderstrom (1978).

Law Enforcement and Corrections

Berk, R.A., and L.W. Sherman. 1985. Randomized experiments in police research. *New Directions for Program Evaluation*. In preparation.

Rossi, P.H., R.A. Berk, and K.J. Lenihan. 1980. *Money, Work, and Crime: Experimental Evidence*. New York: Academic Press.

Sherman, L.W., and R.A. Berk. 1984. The specific deterrent effects of arrest for domestic assault. *American Sociological Review* 49:261-272.

Civil, Criminal, and Administrative Law

Corsi, J.R., L.B. Rosenfeld, G.D. Fowler, K.E. Newcomer, and D.C. Niekerk. 1981. *The Use of Telephone Conferencing in Administrative Law Hearings: Major Findings of the New Mexico Experiment with Unemployment Insurance Appeals*. Final report to the National Science Foundation.

Goldman, G. 1980. *Ineffective Justice: Evaluating the Preappeal Conference*. Beverly Hills, Calif.: Sage Publications.

Partridge, A., and A. Lind. 1983. *A Reevaluation of the Civil Appeals Management Plan*. Washington, D.C.: Federal Judicial Center.

Juvenile and Criminal Justice

Lipsey, M.W., D.S. Cordray, and D.E. Berger. 1981. Evaluation of a juvenile diversion program: using multiple lines of evidence. *Evaluation Review* 5(3):283-306.

Schneider, P., and A. Schneider. 1979. The National Juvenile Justice Restitution Evaluation: Experimental Designs and Research Objectives. Paper presented at the Third National Symposium on Restitution, Duluth, Minn., September 28-29.

Health Services

Cohen, D.I., P. Jones, B. Littenberg, and D. Neuhauser. 1982. Does cost information availability reduce physician test usage? A randomized clinical trial with unexpected findings. *Medical Care* 20(3):286.

Rogers, J.L., and O.M. Haring. 1979. The impact of a computerized medical record summary system on incidence and length of hospitalization. *Medical Care* 17(6):618-630.

Weissert, W.G., T.H. Wan, B.B. Livieratos, and S. Katz. 1980. Cost-effectiveness of day care services for the chronically ill: a randomized experiment. *Medical Care* 28(6):567-584.

Zimmer, J.G., A. Groth-Junker, and J. McCusker. 1985. A randomized controlled study of a home health care team. *American Journal of Public Health* 75(2):134-141.

Nutrition Related

Rush, D., Z. Stein, and M. Susser. 1980. A randomized controlled trial of prenatal nutrition supplementation in New York City. *Pediatrics* 65(4):683-697.

St. Pierre, R.G., T.D. Cook, and R.B. Straw. 1982. An evaluation of the nutrition education and training program: findings from Nebraska. *Evaluation and Program Planning* 4:335-344.

U.S. Department of Agriculture, Office of Analysis and Evaluation, Food and Nutrition Service. 1984. *Food Stamp Work Registration and Job Search Demonstration: Report on Initial Demonstration Sites*. Contract No. 53-3198-0-85. Washington, D.C.: U.S. Department of Agriculture.

Randomized Experiments, Planned and Executed in Varying Degrees, on Youth Employment Programs

Clark, Phipps, Clark & Harris, Inc. 1980. *Advanced Education and Training--Interim Report on the Career Advancement Voucher Demonstration*. Youth Knowledge Development Report No. 5.3. Washington, D.C.: U.S. Department of Labor, Employment and Training Administration.

Clark, Phipps, Clark & Harris, Inc. 1981. Second Year Final Report: *Career Advancement Voucher Demonstration Project*. New York: Clark, Phipps, Clark & Harris, Inc. (60 East 86th Street).

Grandy, J. 1981. Assessment of the U.S. Employment Service Project STEADY. Technical Report No. 9, prepared under contract to the U.S. Department of Labor, Office of Youth Programs. Princeton, N.J.: Educational Testing Service.

Hahn, A., and B. Friedman (with C. Rivera and R. Evans). 1981. *The Effectiveness of Two Job Search Assistance Programs for Disadvantaged Youth: Final Report*. Center for Employment and Income Studies. Waltham, Mass.: Brandeis University.

Manpower Demonstration Research Corporation. 1980. *Summary and Findings of the National Supported Work Demonstration*. Cambridge, Mass.: Ballinger.

O'Malley, J.M., B.B Hampson, D.H. Holmes, A.M. Ellis, and F.J. Fannau. 1981. *Evaluation of the OIC/A Career Exploration Project--1980*. McLean, Va.: Center for Studies in Social Policy.

Resource Consultants, Inc. 1981. *Special Project for Indochinese Youth: Final Results*. Report to U.S. Department of Labor, Employment and Training Administration, Office of Youth Programs. McLean, Va.: Resource Consultants.

Rivera-Sasale, C., B. Friedman, and R. Lerman. 1982. *Can Employer or Work Subsidies Raise Youth Employment? An Evaluation of Two Financial Incentive Programs for Disadvantaged Youth*. Center for Employment and Income. Waltham, Mass.: Brandeis University.

Sadd, S., M. Kotkin, and S.R. Friedman. 1983. *Alternative Youth Employment Strategies Project*. New York: Vera Institute of Justice.

Tallmadge, G.K., and S.D. Yuen. 1981. *Study of the Career Intern Program. Final Report--Task B: Assessment of Intern Outcomes*. Prepared for the National Institute of Education. Mountain View, Calif.: RMC Research Corporation.

APPENDIX

D

Estimates of Effects of Employment and Training Programs Derived from National Longitudinal Surveys and Continuous Longitudinal Manpower Survey

Valerie Nelson and *Charles F. Turner*

In addition to the program-specific evaluations of YEDPA effectiveness reviewed in Chapters 4 through 8, several evaluations have used large representative samples of the American population to derive estimates of the overall impact of all federally funded employment and training programs. The most prominently used data bases in those studies are the Continuous Longitudinal Manpower Survey (CLMS, administered by Westat with data collection by the U.S. Bureau of the Census), and a special youth sample of the National Longitudinal Survey (NLS, administered by the Center for Human Resource Research of Ohio State University with data collection by the National Opinion Research Center--NORC). Both of these surveys involve relatively large samples (over 60,000 in the CLMS and over 12,000 in the NLS) drawn in a manner designed to permit generalizations to the universe of American youths (NLS) or participants in CETA programs (CLMS). (It should be noted that only a fraction of the youths in the NLS sample participated in federally funded employment and training programs, and similarly, only a fraction of the program participants sampled in the CLMS survey were youths.)

While the major charge of our committee was to focus on the Youth Employment and Demonstration Projects Act (YEDPA) knowledge development activities, it seemed prudent to review the findings from studies using these other data bases. Since these studies use data gathered in a different manner and have a somewhat different (and wider) focus, they provide an important supplementary perspective on the substance and problems of the individual YEDPA evaluations we reviewed. Moreover, because these studies use data derived from samples with high sample-coverage rates and low sample attrition, they can provide a more adequate evidentiary basis (at least in respect to sampling methods) than many of the other studies we reviewed.

There are, nonetheless, important limitations to these data bases, as well. First, they are not targeted on specific programs--and so the relevant estimates of aggregate program effects may lump together both

---

Valerie Nelson, an economist, was a consultant to the committee. Charles F. Turner was senior research associate with the committee.

effective and ineffective programs. Second, the data bases (particularly CLMS) limit the extent to which one can take into account the effects of local labor market conditions. Third, these data are not derived from experiments in which subjects were randomly assigned to take part in a program, and hence the resultant estimates of program effectiveness require strong assumptions about the adequacy of the model specification and the matching procedures used to construct synthetic "control" groups. Finally, we should point out that the CLMS reports were provided to the committee in "draft" form late in the course of our work, and thus our evaluation of them has not been as intensive as that of the individual YEDPA reports.

In the following pages we briefly review the characteristics of the NLS and CLMS data bases. We then describe the findings of empirical studies which have used these data bases to estimate program effectiveness. We conclude by discussing the most serious problem with all of the studies (and many of the previously reviewed YEDPA studies): potential biases in the selection of a "control" group of nonprogram participants.

CHARACTERISTICS OF CLMS AND NLS DATA BASES

Both the CLMS and the NLS are full probability samples whose sampling designs appear to have been well executed. That is to say, sample coverage appears high and the available documentation shows that considerable attention was given to important methodological details, such as adequacy of sampling frame, careful screening of respondents to ensure that they fell within the universe being sampled from, extensive follow-up to ensure a high response rate, and so on.

The CLMS was designed to sample all persons receiving training or employment under the Comprehensive Employment and Training Act (CETA), and of course, a portion of that sample would have been young people. (The CLMS sample of program participants is complemented by data for nonparticipants derived from the Current Population Survey (CPS).) The NLS youth sample, on the other hand, is a longitudinal survey of American youths begun in 1979. Because it sampled the entire population of young persons (and indeed oversampled groups who were likely to participate in employment and training programs), it does include a sample of young persons who happened to have participated in YEDPA or CETA programs.

Sample Execution

Rough lower bounds on the number of program participants aged 18-21 in each sample are 21,000 for the CLMS and 1,800 for the NLS. According to information provided by the NLS Data Center at Ohio State University, the NORC sampling report for NLS surveys (Frankel, McWilliams, and Spencer, 1983), and the published CLMS estimates (for initial waves of data collection), it appears that sample attrition rates were on the order of .05 to .10 per wave in both surveys. Because the NLS retained in the sample persons who did not respond in the previous wave of data collection, it is said that each of the 1980-1983 waves interviewed almost .95 of the wave-1 sample. The CLMS, in contrast, lost about .10 of its sample per wave and did not retain nonrespondents from previous waves. Thus by wave 4, it obtained interviews with only .729 of the wave-1 sample.

Measurements

To the extent one focuses on labor force outcomes and income as dependent variables and uses standard human capital-type variables (e.g., education, training, age), either data base might be of value, although the lengthy NLS questionnaire contains a much wider range of social and economic measures than does the CLMS. (One must wonder, however, about the extent to which fatigue may contaminate the replies of the respondents to the NLS.)

Error Structure

The reliability and validity of these data do not appear (from the available documentation) to be buttressed by explicit estimates of the error and bias introduced by respondents, interviewers, coders, processors, and so on. Since the Census Bureau has a routine re-interview procedure, some test-retest measurements are likely available for the CLMS data set. Information on other aspects of the error and bias that affect these data do not appear to be available. It may be reasonable, however, to assume that an error profile for many of these measurements might be similar to those for similar measurements made in other surveys (see, for example, Brooks and Bailar's (1978) error profile for the CPS labor force measurements). Nonetheless, the fact that the population of interest is quite unlike a cross-section of the adult population would argue for caution in making such an assumption.

Time Period for Evaluation

If we assume that recall and other errors in the interview data (and processing and reporting errors in Social Security earnings records) are not too troubling, the CLMS data provide interview data for three years after a young person entered a program. The Social Security earnings records extend this time frame even further (e.g., for the 1975 program entrants we may have earnings in 1983).

For the NLS data we have waves of data covering five years of actual interviewing. Since the NLS obtained retrospective data in its initial interview, for some respondents we will have outcomes that were measured more than five years after participation in a program.

General Issues of Method[1]

Despite the distinct advantages of the large and well-executed CLMS and NLS samples, there are several serious deficiencies in the data. First and foremost, neither data set is a true experimental sample which randomly sorts youths into participant and control groups. As a result, comparison groups must be constructed by a "matching" procedure using demographic variables and preprogram earnings. For the CLMS, a comparison group was drawn from Current Population Survey data and for NLS, a comparison group was drawn from nonparticipants within the sample itself.

However, for reasons discussed in greater detail in the final section of this appendix, these synthetic "control" groups are not entirely adequate. For the one empirical study for which there is explicit evidence, it was found that participants appeared to be more disadvantaged than nonparticipants in ways that could not be "matched" with the available data. As a result estimates of net program impact were downwardly biased.

Information on several key variables is missing in one or another of the samples. In particular, lack of location data in the CLMS makes it impossible to take account of variations across local labor markets or to assess the site-specific component of the variance in outcomes. Furthermore, the matching CPS file fails to record either participation in CETA or subsequent schooling. These deficiencies can lead to underestimates of the overall impact of CETA participation (note 1).

Finally, the analyses of these data frequently ignore the fact that both the NLS and the CLMS have complex sample designs. The variances for estimates derived from such designs can differ considerably from those estimated using simple random sample (SRS) formulas (i.e., those produced by the statistical routines of the most widely used computer packages, e.g., SPSSX, SAS).

---

[1] For the CLMS analyses, further problems are posed by deficiencies in the information available from the CPS files used in matching. First, many CPS youths will have been enrolled in CETA programs themselves, but neither the CPS nor the accompanying SSA files records such participation. SRI estimates these cumulative probabilities over the period of 1975 to 1978 to be: 12.2 percent for adult men, 14.9 percent for adult women, 31.1 percent for young men, and 30.7 percent for young women. Second, time spent in school is not recorded for the CPS sample during the postprogram period. As a result, net impacts can only be estimated for earnings. However, if CETA graduates are more likely than others to seek further education, this will also tend to result in lower earnings for them in the first and second postprogram years, at least. Not only will a negative earnings impact be accentuated, but there will be no record of what is considered an additional, positive impact of CETA, that is a return to school on the part of dropouts or other highly disadvantaged groups. The Urban Institute has found, for example, that negative findings for youths in classroom training may be associated with their increased time spent in school in postprogram years. Such data limitations thus convey an overly negative impression of the impact of the program.

These issues are discussed in greater detail below.

FINDINGS OF STUDIES USING CLMS DATA BASE

Three studies compare CETA participants from the fiscal 1976 and fiscal 1977 Continuous Longitudinal Manpower Surveys with comparison groups selected from the March 1976 or March 1977 Current Population Surveys. These studies were conducted by Westat (1984), SRI International (1984), and the Urban Institute (Bassi et al., 1984). A fourth study conducted by Mathematica Policy Research (Dickinson et al., 1984) compares net-impact estimates derived from such CPS comparison groups with those from a true experimental comparison of participants and controls (using data from the Supported Work demonstration program).

The first three CLMS reports differ in their selection of CPS comparison groups and in the analytic models used for net-impact estimation. However, their findings show similar patterns: negative and statistically significant (or negligible) net impacts on post-CETA earnings for young men and positive, but generally insignificant net impacts for young women. Only on-the-job training seems to produce positive gains for most groups, and work experience is universally negative in its impact on earnings. Among the studies, the Urban Institute reported the greatest negative impacts and Westat the most positive; the SRI results were in-between. Again, however, it is important to note that these findings may be biased estimates of the true impacts of CETA on youths and, as such, may offer an inappropriate assessment of the overall program.

Analysis Strategies

Each of the three CLMS-CETA evaluations used three data sets: (1) CETA participants selected from the Continuous Longitudinal Manpower Survey of program entrants from July 1, 1975, to June 30, 1976, and/or from July 1, 1976, to June 30, 1977 (Westat also conducted some preliminary analysis on an earlier cohort); (2) nationally representative samples of individuals from the Current Population Survey of March 1976 and/or March 1977; and (3) earnings (up to the Social Security tax limit) for both CETA participants from the CLMS and individuals selected from the CPS. Net-impact estimates are based on differences in preprogram and postprogram earnings between the CLMS-CETA participants and earnings changes for similar individuals from the CPS file.

This combination of data appears to offer many distinct advantages over the YEDPA studies discussed in Chapters 4 through 8. The samples are large and nationally representative and cover several years of CETA programs. Annual earnings data are available from Social Security Administration (SSA) files from 1951 to 1979. Comparable data are available on all major programs (classroom training, on-the-job training, Public Service Employment, and work experience) for the same years and for similar economic conditions. Finally, the CLMS file contains detailed data on participants from prime sponsor records, individual interviews at entrance into CETA, and subsequent interviews up to 36 months later. For these reasons and others, Westat has characterized these data as superior to any data set that has previously been available for evaluating large scale federally funded employment and training programs.

The problems of net-impact estimation, however, are substantial and arguments for one method or another have been a central focus of each of the three major studies of CETA using the CLMS data base. Because the disagreements are often sharply drawn and because they result in wide variations in net-impact estimates, these analytic issues are discussed briefly here. No attempt is made to resolve disputes in one direction or another, except insofar as the Supported Work evaluation provides evidence suggesting bias in all of the estimates (see final section of appendix).

Analytic and statistical problems fall basically into three main categories:

1. preliminary screening of individuals from the CLMS and CPS files on the basis of missing or nonmatching data, termination of program participation before 8 days, and similar factors. Such prematch deletions exclude as much as 30 percent of the original sample;
2. selection of a comparison sample from the CPS to match CETA participants along earnings-related dimensions; and
3. specification of a linear regression (or other) model of earnings (and accounting for "selection bias").

Basically, the three studies may be distinguished in the following ways: Westat devoted substantial resources over several years to creating a comparison file with a "cell matching" and weighting technique, but ultimately used a fairly straightforward regression analysis to estimate net impacts. Using these methods, net impacts for youths were generally found to be negligible for men and positive for women (few precise figures for youths were provided in their study). SRI, in a subsequent study, focused on an alternative method of selecting a comparison file using a Mahalonobis or "nearest-neighbor" matching technique, but also adopted straightforward regression analysis for most of its estimates, particularly of youths.

For all the attention paid by both Westat and SRI to the selection of the comparison group, SRI found that the two methods produced similar results, all else held equal. The more negative results presented as findings of the SRI study stem primarily from differences in the preliminary screening process and from updating of earnings with new information from SSA. (SRI's net-impact estimates are $591 for young men and $185, but statistically insignificant, for young women.) Finally, the Urban Institute adopted the Westat comparison file on youths but used a "fixed-effects" estimator to control for bias in selecting participants into CETA and reported substantially more negative net impacts (a range of -$515 to -$1,303 for young men and -$23 to -$391, but statistically insignificant, for young women).

It appears, therefore, that the primary differences in the net-impact estimates are based not in the time-consuming creation of comparison files, but in the preliminary screening of the CPS and CLMS files and in the specification of an earnings model. The Supported Work study by Mathematica provides similar evidence that the particular procedure used to select a comparison sample is less important than the net-impact estimation model (a fixed-effects estimator led to a more negative result than a linear model of postprogram earnings).

The basic goal in selecting a comparison file from the CPS is to find a group of individuals who closely resemble the CETA participants from the CLMS. Lacking a true (experimental) control group, a comparison group procedure is a next-best approach for comparing the earnings and employment outcomes of those who participate with those who do not. Net-impact estimates in these analyses are simply the coefficient on program participation in an earnings regression that controls for background characteristics and other earnings-related differences in a composite sample of youths from CLMS and CPS.[2]

Three basic techniques of selecting a comparison file have been used in these studies:

1. random sampling of CPS cases screened only for program eligibility;
2. stratified cell matching whereby a list of earnings-related variables is generated, CLMS participants are arrayed across cells by these variables, and CPS cases are matched and weighted to produce a similar distribution of participants and nonparticipants. Substantial "collapsing" of cells is required since the number of cells is large even for a small list of variables; and
3. statistical matching based on predicted values of earnings or the "nearest neighbor" technique of minimizing a distance function of a weighted sum of differences in earnings-related characteristics of the individual.

Several tests of the "success" of the CPS match are available. These are similarity in demographic or background characteristics

---

[2] If earnings functions could be correctly specified, a close matching of the CLMS and CPS data files would not be so important. But known nonlinearities, interactions of variables, and other complexities of labor market behavior across the population at large make impact estimates from a simple, linear and additive model highly suspect. Breaking down the files into subgroups (as by sex and race for the Urban Institute and by sex and program activity for Westat and SRI) would handle some matching of youths on other earnings-related characteristics and would also make net-impact estimation more precise for the range of people who are likely to enroll in CETA.

(especially those variables that are important determinants of earnings), similarity in preprogram earnings, and similarity in preprogram earnings functions. In particular, a test may be made of whether a CETA participation dummy variable is predictive of (or correlated with) a preprogram dip in earnings, as an indicator that program administrators may be "creaming" those individuals with a temporary drop in a relatively high "permanent" income stream.

A fixed-effects estimator is designed to control for such creaming and other sample selection bias by "differencing" a base-year and a postprogram year earnings equation. Any unobserved characteristics that lead to participation in CETA, but also affect earnings, are assumed to be constant over time and can be accounted for in such a procedure. If there is creaming based on a transitory preprogram drop in income, then the base-year must be chosen a year or two earlier to reflect a more permanent income trend.

In the majority of cases in the three reports, the CPS comparison groups pass the tests of similarity to CLMS/CETA participants. For example, as a result of cell matching or nearest-neighbor matching, the CPS pool is winnowed from a largely white sample of in-school youths or high school graduates from families above the poverty level to a mixed black/white sample that includes large numbers of high school dropouts from families below the poverty line. The comparison groups also resemble CETA participants in preprogram earnings. Matching on such background characteristics and preprogram earnings, of course, does not necessarily equalize unmeasured characteristics (e.g., actual or perceived motivation, ability)--a point to which we shall return.

Westat Findings

In 1980, Westat began to release a series of net-impact studies based on CLMS and CPS data. Comparison groups were created using stratified cell-matching techniques for CETA entrants in the first half of 1975, and for fiscal 1976 and 1977. Cells were defined by such variables as age, race, sex, family income, and education. Two basic matching subdivisions were made: one divided the CLMS sample into low, intermediate, and high earners and constructed separate CPS comparison file for each, and a second divided the program activities into: classroom training, on-the-job training, public service employment, work experience, and multiple activities. Because the latter match was more "successful" in terms of passing statistical tests of similarity between groups, it was used in most of the later Westat studies. Net impacts were estimated for three post-CETA years for the fiscal 1976 group and for two years for the fiscal 1977 group.

Westat's (1984) report summarizes their findings over the last several years. Although the report presents very few specific results for young men and women, its overall conclusions for adults are of interest. Key findings are the following:

- Statistically significant positive impacts for both cohorts and all postprogram years; estimates ranged from a low of $129 per year to a high of $677;

- Among programs, classroom training and on-the-job training show the highest net impacts and work experience the lowest; these rank orders are relatively stable across cohorts and postprogram years;
- For the first cohort, there was a marked difference in net impacts by sex--males experienced statistically insignificant gains and females experienced significant gains;
- For the second cohort, however, net impacts converged for men and women at statistically significant levels;
- Higher net impacts for low earners (less than $2,000 in 1972 and 1973) than for high earners;
- Positive gains from "placement" in a job at termination and increasing gains with length of stay in the program;
- Substantially higher net impacts for the second cohort than for the first; these are attributed to a dramatic increase in net impacts for men, a decline in the proportion of youths with work experience, and across-the-board increases in all programs.

Specifically for youths, Westat found,

- Youth work experience programs are statistically insignificant for all cohorts and postprogram years.

Other specific youth-related findings are not reported in Westat (1984), but the Urban Institute has characterized Westat's results from earlier reports, as follows:

> In looking at youth, Westat (1982) has found that for those youngsters 14 to 15 years old, CETA has had little overall impact. For other young workers net gains are found, being highest once again for OJT, followed by PSE and classroom training, and being negligible for work experience. The results found for young workers also tend to persist in the second postprogram year. Westat also produced a technical paper focusing on youth in CETA (1981) in which net gains were broken down by sex. As with adults, net gains were greatest for young females, being negligible or insignificant for males. After classifying youth according to their attachment to the labor force, net earnings gains were found to be greatest among structurally unemployed or discouraged workers.

SRI Findings

SRI's analysis differs from Westat's in two key respects: in the selection of the comparison group and in its "sampling frame." SRI's comparison groups were drawn by use of a "nearest-neighbor" matching procedure based on minimizing the "distance" of CLMS participants and selected CPS matches along earnings-related variables. SRI's sampling frame differed from Westat's in the following specific ways: development of calendar year cohorts rather than fiscal year cohorts; SRI

TABLE D.1 SRI Estimates of Net Impact of CETA on SSA Earnings (Standard Errors in Parentheses)

Subgroup	SSA Earnings (dollar impacts)
Adult men	-690
(N=6,144)	(139)
Adult women	13
(N=5,438)	(116)
Young men	-591
(N=3,298)	(167)
Young women	185
(N=2,826)	(139)

NOTE: Published standard errors for estimates appear in parentheses but are likely to be inaccurate; see note 5.

SOURCE: SRI International (1984).

inclusion (versus Westat exclusion) of individuals who received only "direct referrals" among those who received fewer than eight days of treatment; SRI exclusion (versus Westat inclusion) of individuals who worked in 1975 but were out of the labor force in March 1976; and use of a different set of rules for excluding individuals if key CPS or CLMS codes did not match their SSA codes.

SRI's model differed from Westat's only in the addition of several variables, such as veteran status and earlier earnings and the square of 1975 SSA earnings. (Table D.1 presents SRI estimates of net impacts of CETA on earnings for all participants in 1978.) SRI also experimented with fixed-effects estimators for adult men and women, but argued that they were not appropriate for youths just beginning work.

SRI's estimates of program effects were substantially below Westat's for both adults and youths, and the authors spent considerable time in identifying the sources of those differences. From their analyses, the SRI authors concluded that most of the differences could be attributed to choices made in the sampling frame and to an updating of 1979 SSA earnings.[3]

---

[3] Net impacts were minimally sensitive to the estimation model or to the matching technique used.

SRI (1984) reported the following findings for 1976 CETA enrollees:

- Participation in CETA results in significantly lower postprogram earnings for adult men (-$690) and young men (-$591) and statistically insignificant gains for adult women (+$13) and young women (+$185).
- All program activities have negative impacts for men, but adult women benefit from PSE and young women from OJT. Work experiences have negative impacts for all age and sex subgroups.
- Both male and female participants are more likely to be employed after CETA, but males are less likely to be in high-paying jobs or to work long hours.
- Length of stay in the program has a positive impact on postprogram earnings; turning points for young men are at 8 months and for young women at 1 month.
- Placement on leaving the program leads to positive earnings gains.

Urban Institute Findings

The Urban Institute used Westat's match groups from the CPS and estimated net impacts for six race/sex groups (male/female by white/black/Hispanic). Both random-effects estimators and fixed-effects estimators were used to identify net impacts, but the emphasis was on fixed-effects models which controlled for selection bias. Net impacts were estimated for two postprogram years, 1978 and 1979. (Table D.2 presents net impacts estimated in the Urban Institute analysis.)

The Urban Institute (Bassi, et al., 1984) found, for youths:

- Significant earnings losses for young men of all races and no significant impacts for young women; these impacts persist into the second postprogram year;
- Significant positive net impacts for young women, particularly minorities in Public Service Employment and on-the-job training and significant negative or insignificant net impacts for all groups in work experience;
- Among subgroups, the most negative findings were for white males, the most positive for minority females;
- Older youths (22-year-olds) and those who had worked less than quarter time had stronger gains or smaller losses than the younger group or those who had worked quarter time or more;
- Earnings gains resulted primarily from increased time in the labor force, time employed, and hours worked, rather than from increased average hourly wages.

FINDINGS OF STUDIES USING NLS DATA BASE

Two major studies have used the National Longitudinal Survey data base to estimate the aggregate effects of government-sponsored employ-

TABLE D.2 Urban Institute Estimates of Net Impact of CETA Participation on Earnings of Youths Under Age 23, for Three Models

Race/Sex Group	1978			1979		
	RE[a]	FE-75[a]	FE-74[a]	RE[a]	FE-75[a]	FE-74[a]
White females	- 109	- 23	- 68	- 190	- 92	- 136
	(.930)	(.194)	(0.57)	(1.33)	(0.62)	(0.92)
Black females	- 201	- 77	- 159	24	170	88
	(0.89)	(0.34)	(0.71)	(0.09)	(0.61)	(0.32)
Hispanic females	- 391	- 261	- 231	- 501	- 348	- 318
	(1.10)	(.716)	(0.64)	(1.14)	(0.79)	(0.71)
White males	- 593	- 515	- 576	- 795	- 728	- 789
	(4.23)	(3.73)	(4.12)	(4.47)	(4.11)	(4.43)
Black males	- 989	- 681	- 758	-1167	- 748	- 822
	(3.67)	(2.57)	(2.85)	(3.42)	(2.16)	(2.38)
Hispanic males	-1155	-1193	-1303	-1009	-1080	-1190
	(2.56)	(2.61)	(2.82)	(1.78)	(1.89)	(2.07)

NOTES: Coefficients represent dollar impacts on social security earnings. Published t statistics are in parentheses, but are likely to be inaccurate; see note 5.

[a] Models: RE--random effects; FE-75--fixed effects, base period 1975; and FE-74--fixed effects, base period 1974.

SOURCE: Bassi et al. (1984).

ment and training programs on youths. One study (Moeller et al., 1983) was conducted by the Policy Research Group (PRG) of Washington, D.C., and the other (Hahn and Lerman, 1983) by the Center for Employment and Income Studies (CEIS) of Brandeis University. Both studies evaluated the effects of CETA programs on youths, although the PRG study expanded its scope to include schooling programs, such as vocational education.

The estimates made by both studies indicate relatively modest effects of employment and training programs on the subsequent income, employment status, and educational attainment of the youths who participated in those programs. For CETA programs both studies find negative overall effects of CETA on employment, although PRG reports some positive effects at two years after CETA completion. Reviewing PRG results and their own findings, the CEIS authors (Hahn and Lerman, 1983:84) dourly conclude an appendix to their chapter entitled "Did the CETA System Work for Disadvantaged Youth?" by noting:

> To conclude, both the PRG results and our own show negative and significant effects of CETA on employment variables. It is only after going out two years in time after CETA completion that the PRG report finds evidence of a positive, significant effect and that on only one variable, unsubsidized earnings. We cannot confirm this positive effect, but it would not be

> inconsistent with our results. It is difficult to claim this as an impressive success for CETA. [emphasis added]

Since the substantive findings from the NLS analyses are generally consistent with the weak and generally negative findings from the CLMS analyses we do not review them in great detail. Instead, we briefly describe the analysis strategies and findings of each of the studies then turn to a consideration of the potential for bias introduced by use of statistical matching procedures rather than random assignment to construct "control" groups in the CLMS and NLS analyses.

CEIS Procedures and Findings

The analysis reported by Hahn and Lerman (1983) employs a nearest neighbor matching procedure* to construct a "matched" control group to be compared with the 1,114 respondents in the NLS youth sample who reported participating in CETA programs. (The matched sample was constructed by selecting respondents from among the 4,608 NLS respondents who reported that they had not participated in a CETA program and who were neither in the military nor had family incomes above $25,000 in 1978, and who did respond to the questions used to construct the eight matching variables.)

The variables used for matching were: sex, race, age, family size, family income (in 1978), weeks employed (in 1978), whether the youth was living at home, and whether the youth was a high school dropout. All the matching variables were derived from the 1979 survey. The resulting "matched" sample was then used to estimate the impact of (prior) participation in CETA programs on earnings and employment in 1979 and later years. As with the CLMS matchings, the CEIS analysis of the NLS data base takes a pool of largely white, middle-class youths and produces a "matched" sample which is 65 percent black and has a mean family income of $8,790 (in 1978).

The CEIS analysis concentrates initially on employment in unsubsidized jobs as its major outcome measure. The authors argue that this is the appropriate outcome measurement for initial study since "politically the motivating concern in establishing a CETA program" was to increase the likelihood that disadvantaged youths could find employment in the regular (i.e., non-CETA) labor market. Their key analysis derives an estimate of program effects for a regression model that incorporates 20 other independent variables.

The coefficients estimated in this analysis are reproduced in Table D.3 together with the published t-ratios. (The latter statistics appear to ignore the complex sampling design used in the NLS and thus are likely to be inaccurate.[5]) It will be seen from Table D.3 that the net-impact estimates derived from this analysis are quite negative,

---

*Hahn and Lerman (1983:75) used a "nearest available Mahalonobis metric matching" method suggested by Rubin (1979).

(text is continued on p. 269)

---

[5] A complete assessment of the variance and bias components of estimates derived from surveys of complex design requires an assessment of effects arising from sample design, interviewer contributions to the variance, and the effects of sampling frame bias and nonresponse, among other factors. These variance components in survey estimates are typically referred to as "design effects."

It is often the case that the secondary analyst lacks sufficient information (coded into the sample data) to make adequate assessments of such components of the variation in his or her estimates. In the NLS (and many other surveys conducted by quality-conscious research organizations), information is available concerning the sample design used in the survey (see Frankel et al., 1982).

Like many large-scale household surveys, the NLS used a multistage area probability sample with sample clustering at the block level. For reasons of cost and efficiency, self-weighting simple random samples (SRS) are seldom used in such large-scale surveys. Rather, sample designs incorporate a multi-stage selection process and some type of sample clustering. Instead of a random draw of individuals, small geographical areas (e.g., blocks in cities) are sampled, and then a number of individuals in that area are selected for interview. This group of individuals is referred to as a sample cluster. Cluster sizes of 5 to 10 individuals per "block" are common in national surveys. In personal interview surveys, such sample clustering is a practical necessity, since any random draw of subjects in a national survey might require some interviewers to travel hundreds of miles between successive interviews.

Because a sample of, say, 5,000, may thus consist of 500 randomly selected "blocks," from which 10 individuals were selected, the variances of both univariate and multivariate statistics are not accurately portrayed by the well-known formulas that apply to simple random samples. This is so because the sampling of individuals was not independent of their location. To the extent that individuals within a selected location are homogeneous with respect to a given measurement, the effect of the use of a clustered sample is to increase the variance of the estimates (above those that obtain for SRS designs)--or, to express it another way, to decrease the effective sample size from the number of individuals (N_i) toward the number of locations that were chosen (N_c). In extreme cases, e.g., the use of such samples to estimate the distribution of the population across (self-perceived) rural versus nonrural areas, the effective sample size may approach N_c since almost all of the extant variation occurs between rather than within sample clusters--and hence we have a sample of N_c clusters, where almost all of the N_i respondents in any one cluster give the same response when asked whether they live in a rural area. Another way of expressing this result is to say that the intra-cluster correlation of response approaches 1.0 for this variable. For more rigorous theoretical treatments of this matter, see Hansen et al.

(Footnote 5 is continued on pp. 268-269)

(1953) or Kish (1965); for an elementary introduction, see Blalock (1972:520-530).

Of course, residence in a rural area is an extreme case, but high intracluster correlations arise for many other variables of interest. The type of dwelling unit (apartment versus house) has similar characteristics, and even such crucial variables as race and income show relatively high intra-cluster correlations in sample surveys as a result of the residential segregation of neighborhoods. (Persons of the same race, income, and so on tend to live together.)

This has important practical implications for the survey analyst since the widely used algorithms for computing variances for simple random samples (e.g., those of the SPSSX, SAS, and BMD computer packages) are not appropriate. Use of SRS formulas to calculate the sampling variances from commonly used cluster designs may considerably understate standard errors for means, regression coefficients, and so on. Since variances and their roots figure crucially in all inferential statistics, serious errors of inference can be made.

Design effects (deff) that arise from the use of complex sample designs are commonly expressed (see Kish, 1965:258ff) as the ratio of the actual variance of a sample estimate to the variance of an SRS sample of equal size. The square root of the deff ratio (which is referred to as deft) can be used to "deflate" statistics derived under SRS assumptions. For example, in the case of the t-statistic:

$$\text{deft} = (\text{deff})^{0.5}$$
$$t_{\text{true}} = t_{\text{srs}}/\text{deft}$$

A careful study (Frankel, 1971) of design effects for eight variables in the Current Population Survey found values of deft that ranged from 1.1 to 1.5. (The variables studied were number of persons in household, number aged 0-17, number in labor force, household income, and, for the "head of household," income, age, sex, and educational attainment.) In discussing the practical importance of such studies, Frankel (1971:1-2) observed:

> As social scientists become more mathematically sophisticated and attempt to use sample survey data to uncover multivariate relationships, the gap between the assumptions of existing statistical theories and the actuality of sample designs used to collect data, make the valid use of standard inferential techniques tenuous. Naive researchers may be unaware of this gap and may use inference which assumes that their sample is a simple random selection of elements. However, more sophisticated social scientists are faced with the task of making statements like that of Blau and Duncan in their study, The American Occupational Structure: "We do not know, however, how other statistics, such as regression coefficients . . . and F-ratios, are affected by the departure of the sampling design from simple random sampling. Only very rough guesses about standard errors can be made. . . ."

e.g., -$1,640 in 1980 earnings (from unsubsidized employment). The CEIS study further examines some of these outcomes for particular population subgroups and youth participating exclusively in "skills training" programs. With a few modest exceptions, however, these analyses lead the authors to similar conclusions, i.e., no (positive) net impact of CETA participation.

While these analyses share many characteristics with the CLMS analyses (and share the potential for "matching bias" that is discussed in the final section of this appendix), they do have unique aspects that should be noted. A critical one is their reliance on respondents' self-reports of whether they participated in CETA.[6] Although no estimates of the error and bias components of these measurements are proffered, it is unlikely that these crucial variables will be reported without error. Also, in contrast to the SSA records used in the CLMS analyses, the CEIS study must rely on the self-reports of earnings in the NLS--and indeed must then use other self-reports to characterize those earnings as "subsidized" or "unsubsidized." Here, again, the potential for inaccuracies in such reports (involving both random and systematic errors) could potentially affect the outcomes obtained in the CEIS analysis.

Frankel's (1971) findings suggest that standard errors for his eight variables would be understated by about 10 to 50 percent if SRS formulas were used (with the larger numbers applying to multiple correlation statistics, the smaller to multiple regression coefficients, and means and simple correlations resting in the middle). He has, however, no available data for race, which is quite highly clustered geographically (racial discrimination and other factors produced a very nonrandom distribution of blacks and whites across "blocks" and neighborhoods in the United States). Statistical research on health surveys (Landis et al., 1982) indicates that defts in excess of 2.0 occur for such things as the partial regression coefficient representing the "effect" of race on health conditions (e.g., standard errors for the "effects" of race on number of decayed teeth, net of age, sex, and consumption of sugar, may be underestimated by a factor of 2 or more if SRS formulas are used). It is difficult to assess what analogous values might be in earnings equations, but caution is clearly advisable in interpreting the estimates provided by the CEIS and PRG analyses.

[6] CLMS, in contrast, sampled participants from lists using administrative records (from prime sponsors). The CPS match samples used in the CLMS studies are, however, subject to similar but even more severe concerns. It is not possible to identify "program participants" in the CPS match sample, and thus the CLMS analyses must contrast a sample of individuals who all participated in CETA with a cross-sectional sample containing both participants and nonparticipants.

TABLE D.3 CLIS Estimates of Net Impact of Participation in CETA on Unsubsidized Net Earnings (in dollars per year)

Independent Variables	Unsubsidized Earnings 1979	1980
Participation in CETA	-675.9 (-3.92)	-1640.2 (-7.54)
Reservation wage	661.4 (5.4)	980.8 (6.28)
Has child	142.7 (0.45)	130.3 (0.31)
White	-74.7 (-0.37)	17.3 (.07)
Has illicit income	9.5 (.04)	-57.8 (0.20)
Rotter scale (locus of control)	65.7 (0.90)	-70.2 (-0.70)
Family income 1978	.047 (3.56)	0.060 (3.48)
Area unemployment rate 1979	-22.0 (-0.61)	27.14 (0.60)
Weeks employed 1978	57.2 (10.97)	49.85 (7.43)
High school dropout 1979 interview date	234.7 (0.92)	-525.0 (-1.59)
Female	-867.3 (-4.51)	-1077.4 (-4.32)
Family size	-148.0 (-3.49)	-160.7 (-2.88)
Knowledge-of-world-of-work scale	11.8 (0.23)	14.2 (0.21)
Numerical operations standard score	88.0 (0.77)	55.4 (0.37)
Age at 1979 interview	287.8 (4.44)	407.9 (4.81)
Mechanical comprehension	-79.8 (-0.56)	-140.9 (-0.78)
Does not live at home	-23.1 (-0.08)	-537.4 (-1.44)
Paragraph comprehension standard score	137.1 (0.95)	-95.7 (-.50)
Math knowledge standard score	-242.3 (-1.48)	-327.2 (-1.55)
Word knowledge standard score	-98.7 (-0.62)	-139.0 (-0.68)
Arithmetic comprehension scale	250.3 (1.34)	368.8 (1.54)
Constant	-3908.8 (-3.38)	-4456.9 (-2.92)
R^2	.24	.22
N	1266	1120

NOTE: Published t statistics appear in parentheses beneath coefficients, but for reasons discussed in note 5, these values are likely to be inaccurate.

SOURCE: Hahn and Lerman (1983).

PRG Procedures and Findings

While the PRG analyses differ in their details from those of CEIS, the basic strategy was the same. PRG used the NLS youth sample to (1) identify all participants in government employment and training programs, (2) construct a comparison group of nonparticipants, and (3) estimate a model for the outcome variables of interest. The PRG analysis of the NLS data base differs from CEIS's in its use of a wider range of outcome measures (including earnings, employment, educational, and marital outcomes) and a somewhat different strategy for constructing a comparison group of nonparticipants.

PRG used what it described as a "stratified random sampling procedure" to select the comparison group, but the description of this procedure is unclear in some respects. The authors' (Moeller et al., 1983:E-1) "overview" of the procedure is stated as follows:[7]

> Both the CEIS (1982) and Westat (1980) studies . . . adopted a "match" procedure for selecting a control group (hereafter referred to as the CGRP). We instead chose to use a stratified random sampling procedure for its computational advantages and sound statistical approach to selecting the CGRP sample. In combination with a reasonably complete control variable specification in the outcome regressions, weights for the two samples to equate the number of participant and comparison group members within each stratification cell, and a selectivity bias correction for "unmeasured" differences between the participant and CGRP members, we did not judge the additional computational burden of a match procedure to be warranted.

It appears that this procedure involved the construction of a synthetic variable representing the socioeconomic status (SES) of the respondent and then cross-classifying participants and nonparticipants by SES, sex, race, local unemployment rate, region. Prior to the cross-classification, each of these variables was dichotomized (e.g., local unemployment: 0-5 percent versus 6 percent or more), except for region, which had four categories. Nonparticipants were then selected at random from within the resulting 128 cells with the probability of selection for each cell being equal to the proportion of the participant sample that fell into the same cell.[8]

---

[7] This text is an accurate reproduction of the PRG statement (the original is also garbled). It should be noted, too, that the "selectivity bias correction" analysis was not included in the PRG report, and according to statements elsewhere in the report these analyses were not performed.

Two aspects of the PRG analysis are troubling. First, the authors used an ordinary least squares procedure to estimate their model equations where some of their dependent variables take only two values (e.g., 0: out of school, 1: in school). This, in addition to use of procedures that assume simple random sampling, raises doubts about the accuracy of the reported significance levels. On a more substantive level, we note that the authors never combine their separate analyses of employment status and education, and so we cannot tell to what extent the decreased earnings of CETA participants might be due to the increased enrollments in school. If this were to account for an important share of the observed income drop, one might characterize the earnings decline as an investment of foregone earnings in education rather than a negative outcome of CETA.

Additional PRG analyses estimate that CETA had few impacts on other outcomes (e.g., receipt of welfare or unemployment income, criminal behavior, graduation from high school, disciplinary problems in school, or health status) that were reliably different from zero, based on the

---

[8] Because the published description of these procedures is garbled in places, it is not entirely clear how this selection strategy would differ from a cell-matching procedure--except for the arbitrary manner in which the size of the "control" sample is set (i.e., by specifying a sampling fraction). In other details, there are also several puzzling aspects. For example, great efforts are put into constructing a composite family income and social status indicator (from a regression using 97 variables reflecting aspects of youths' income and social status), but the resultant continuous variable (scaled in a metric of "expected" family income) is merely dichotomized (less than $15,000 versus more than $15,000 per year).

The resulting samples were then used to estimate program impacts by embedding a dichotomous program participation variable in equations predicting each of the outcomes shown in Table D.4. (Other independent variables in these equations were intended to control for region, age, race, pre-enrollment employment status, family income, marital status, educational level, and health status.) It will be seen from Table D.4 that across all time periods studied, PRG estimates that the net impact of CETA was -$28 per month on earnings from unsubsidized employment. Estimated net impacts for other outcome variables are also negative or "insignificant." (Note, however, that the t-ratios are likely to be inaccurate since the PRG analysis treated the NLS data as if they had been derived from a simple random sample of the population; see note 5.) The sole positive result shown in this analysis is for education, for which it is estimated that the net impact of CETA was to increase the probability that the youth would remain in (or return to) school by 5.6 percent.

TABLE D.4 PRG Estimates of Net Impact of Participation in CETA on Employment, Earnings, Education, and Marital Behavior

Outcome	Impact of CETA
Months of unsubsidized employment	-.051 (2.85)
Unsubsidized earnings	-27.698 (2.34)
Hours of unsubsidized employment per month[a]	-8.844 (3.89)
Hours of unsubsidized employment with wages set by collective bargaining	-.008 (.92)
Probability of being employed in unsubsidized job	.028 (1.59)
Months of regular school	.014 (.98)
Probability of being in regular school	.056 (3.45)
Probability of being married	-.088 (.54)

NOTE: Averages calculated over the youth's postprogram quarters, up to 12. The t statistics appear in parentheses, but are likely to be inaccurate; see note 5.

[a] This entry is listed in source as "months of unsubsidized employment," not hours, but this appears to be a typographical error, since it duplicates first entry in table.

SOURCE: Moeller et al. (1983).

PRG computations. The two exceptions were increased use of drugs among CETA participants (net impact +7.3 percent) and increased likelihood of being married (10.2 percent).[9] However, teenage matrimony would be unlikely to qualify as a positive outcome of a CETA program, and of course, the increased "use or sale of marijuana, hashish, or hard drugs" would be thought by most observers to be a negative social outcome. The sole optimistic findings of the PRG analysis occur two years after program completion. For selected quarters, the authors find evidence of positive net impacts of CETA on unsubsidized earnings and employment status. These impacts were not, however, reliably different from zero (using the authors' statistics) at the time of the last NLS measurements (33-36 months after program completion).

---

[9] Note that these two dependent variables are also dichotomies which were analyzed using OLS procedures.

BIASES IN ESTIMATES OF PROGRAM EFFECTIVENESS ARISING FROM USE OF MATCHED SAMPLES RATHER THAN RANDOM ASSIGNMENT

Across the three CLMS studies, there is a pattern of preponderantly negative net impacts on youths, and the NLS studies show extremely weak effects of program participation. These results invite the conclusion that federally funded employment and training programs have had (in the aggregate) either little effect or a deleterious effect on the future earnings and employment prospects of the youth who participated in the programs. There is, however, reason to suspect (and empirical evidence to support the suspicion) that the foregoing estimates may be biased downward.

The reason[10] for this suspicion is that (despite intensive and varying efforts to select comparison groups similar to participants in youth programs and to control for selection bias through use of fixed-effects estimators) there may still be persistent and systematic, but unobserved, differences in the earnings profiles of comparison groups and true controls. Lower earnings, for example, might be due to such unobserved factors as (perceived or actual) differences in social attitudes, motivation, or ability between program participants versus a more "mainstream" comparison group.

A study by Mathematica (1984) provides important evidence on the potential for bias in the use of matching strategies such as those employed in the NLS and CLMS analyses reviewed above. The Mathematica study used data from a true experimental design that randomly assigned youths to be either program participants or controls. It then compared net impact estimates derived using the experimental design with estimates derived using the same sample of program participants but substituting various "matched samples" constructed from the CPS.[11] Mathematica examined net impacts based on simple differences in earnings gains, on a straightforward earnings regression model, and on a fixed-effects estimation model. Separate comparisons were performed for youths and women receiving Aid to Families with Dependent Children (AFDC).

---

[10] In addition to the potential bias in the matched control groups, there are two other reasons to question negative conclusions from the CLMS studies. The CPS lacks data on enrollment in CETA on the part of the comparison group and, as a result, positive net impacts may be underestimated since some of the "controls" were actually program participants. In addition, postprogram earnings are taken from SSA files, which contain no information on subsequent education or training. However, to the extent that CETA encourages further schooling, it reduces immediate postprogram earnings (and therefore lowers the net-impact estimate), but it probably should be viewed as a positive impact in its own right. Nevertheless, this interaction has not been and cannot be examined with the available data.

Based on a true control group, Mathematica found in-program earnings gains and negligible postprogram effects for youths. Comparison of Supported Work participants and the CPS matched sample, however, yielded either insignificant or significantly negative effects. Moreover, the bias apparent in the match sample estimates was even greater using a fixed-effects estimator rather than a basic earnings model.

Figure D.1 (from Mathematica, 1984:Figure III.3) illustrates how this bias in the matched samples occurs. The age-earnings profiles of participants and true controls are dramatically different in the years following the program from the profiles of matched controls derived from the CPS (regardless of which of the three matching strategies is used).

While cell matching or statistical matching reduces mean differences in preprogram earnings and in background characteristics, subsequent earnings still diverge, for reasons that are left unobserved and unexplained, but which may have to do with actual or perceived differences in motivation, ability, or social attitudes (among other possible factors). (Alternatively, it may be the case that the scale of subsidized youth programs in 1978-1981 was sufficiently large that the programs indirectly improved the comparison groups' employment prospects. By temporarily withdrawing many participants from the competitive labor market for low-income youths, the programs may have enabled some nonparticipants to obtain more readily whatever unsubsidized jobs were available, and to this extent they boosted employment outcomes above what they would have been in the absence of such federally funded programs.)

Results for AFDC women provide an interesting contrast. In some instances, the Mathematica analysis finds an upward bias in estimates of program effects. But, in general, both the true control group analyses and the matched control group analyses show large and significant impacts both during and after the program. No clear pattern of

---

[11] Three techniques of matching were used: general eligibility screens, such as high school dropout; cell matching and weighting (similar to the technique used by Westat); and statistical matching based on predicted earnings (rather than on earnings-related variables, as done by SRI).

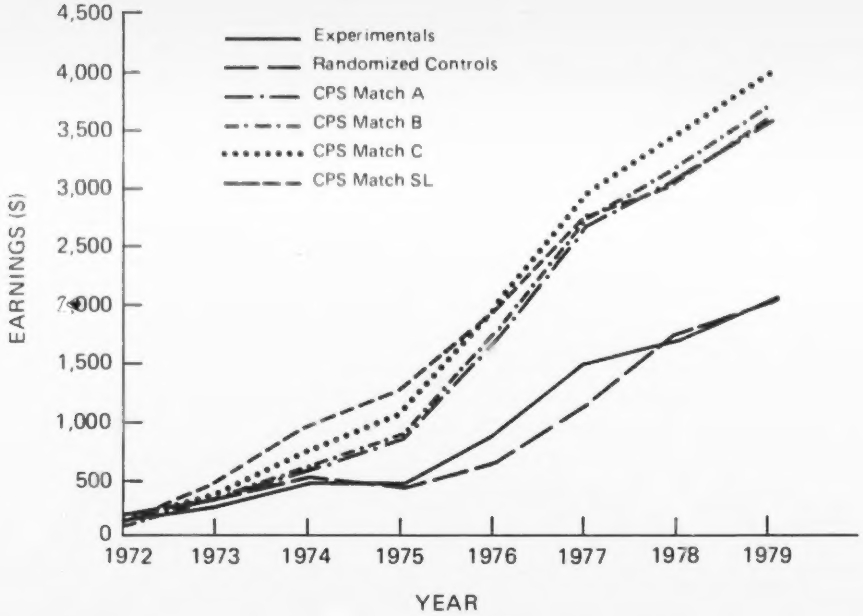


FIGURE D.1 Comparison of average SSA earnings for program participants and randomly assigned controls in Supported Work experiment to SSA earnings for "match groups" constructed from CPS sample using alternative matching strategies.

SOURCE: Mathematica Policy Research (1984:Figure III.3).

difference is found between the results obtained using a basic earnings model and a fixed-effects model. Mathematica argues that a similar negative bias probably exists for other CETA evaluations using constructed comparison groups rather than true controls, at least for youths, and it specifically cites the Westat, SRI, and Urban Institute findings in this regard.

Table D.5 (from Mathematica, 1984:Table IV.7) shows net impact estimates derived from Mathematica's analyses of Supported Work, together with estimates of overall program impact from the studies by Westat, SRI, and the Urban Institute. Mathematica acknowledges that its Supported Work sample is more severely disadvantaged and therefore more likely to have lower earnings profiles than the typical CETA youth participant. Nevertheless, there is some overlap of the two groups, and the Supported Work program did primarily provide supervised employment, which is an element of youth programs common to on-the-job-training projects, work experience projects, and public sector employment projects.

TABLE D.5 Alternative Estimates of Net Impact on Earnings (in dollars per year) of Participation in Supported Work and CETA Using Alternative Comparison Group Methodologies and Estimation Techniques

Study and Methodology	Participant Group Youths	AFDC Women
Supported Work participants		
Control group methodology	- 18	351*
Comparison group methodology[a]	-339 to -1179**	257 to 806**
CETA participants with comparison group methodology		
Westat[b]	--	500** to 600**
SRI using Westat comparison group[c]	-122[d]	488***
SRI using SRI comparison group[c]	-524***[d]	246*
Urban Institute[e]	-515** to -1303**	556*** to 949***[f]

NOTES: Earnings are for 1978 for Supported Work and 1979 for CETA. Supported Work participants tended to enroll in the program slightly later than did the CETA participants included in the CETA net-impact studies. For this reason, 1979 outcome measures for the Supported Work samples are most nearly comparable to the 1978 outcomes for the CETA participant group studied. Published significance levels are denoted by asterisks, as follows:

* p less than .10
** p less than .05
*** p less than .01

However, for reasons discussed in note 5, these levels may be inaccurate.

[a] Excludes results based on the random CPS samples meeting the Stage 1 screens.
[b] See Westat, Inc. (1980:Tables 3-6).
[c] See Dickinson et al. (1984, draft:Table V.3). Results reported pertain to enrollees during the first half of 1976.
[d] These figures pertain to male youths only. Data in the report did not permit the calculation of an overall impact for all youths. However, only 12 percent of the Supported Work youth were female.
[e] See Bassi et al. (1984:Tables 3 and 22).
[f] These figures pertain to female welfare recipients. Similarly large positive impacts were also estimated for all economically disadvantaged women.

Because of such similarities, Mathematica analysts argue that similar biases in estimates of program effectiveness may exist in the net impacts estimated by Westat, SRI, and the Urban Institute, and they conclude that "It is not possible to generate reliable net program impact estimates using ex-post comparison group procedures."

CONCLUSION

While argument may be had (at great length given the dearth of reliable evidence) concerning the extent to which the Mathematica demonstration of bias in the matched sample methodology can be generalized, the study does highlight two separate problems in net-impact estimations using a matched comparison group:

1. the extent to which employment programs recruit or attract participants who differ from eligible nonparticipants in ways that may affect subsequent earnings; and
2. the extent to which such differences can be detected and controlled using available demographic or preprogram earnings data.

For the latter problem youths presents a particularly difficult case for any match strategy because preprogram earnings data are either not extant or not reliable indicators of the uncontrolled variables that are of interest to program evaluators.[12]

Estimates of the magnitude and direction of the bias in matched-group evaluations are only available for the one youth program (Supported Work) whose experimental data were reanalyzed by Mathematica. From this reanalysis we have an elegant demonstration that commonly used "match" strategies would have yielded an inappropriately negative evaluation (where the experimental data indicate that the program had a null impact). There is an obvious temptation to leap from this one result to the assumption that biases equal in magnitude and direction affect all other "match group" studies. The available evidence, however, is not sufficient to warrant such a sweeping generalization. Until the methodological point is clarified by expanding on the provocative paradigm provided by the Mathematica analysts, there is considerable uncertainty as to the extent to which this finding will generalize to other program evaluations involving different populations of youths. Providing the requisite data will take a renewed commitment to conducting the randomized experiments needed to make estimates of the magnitude and direction of the biases involved in common matching strategies.

---

[12] In contrast, for adult women receiving Aid to Families with Dependent Children, it is apparently possible to control for such differences. Welfare payments are known, and preprogram earnings are a much better indicator for adults than they are for youths, and they can be used both in selecting a matched comparison sample and as a control variable in the net-impact estimation. Finally, the trend in preprogram earnings can be used to test for "creaming" or other sample selection biases that can be removed from the estimates.

REFERENCES

Bassi, L.J., M.C. Simms, L.C. Burbridge, and C.L. Betsey
1984 *Measuring the Effect of CETA on Youth and the Economically Disadvantaged*. Washington, D.C.: The Urban Institute.

Blalock, H.
1972 *Social Statistics*. New York: McGraw Hill.

Blau, P., and O.D. Duncan
1967 *American Occupational Structure*. New York: Wiley.

Brooks, C., and B.A. Bailer
1978 *An Error Profile: Employment as Measured by the Current Population Survey*. Statistical Policy Working Paper No. 3. Washington, D.C.: Office of Federal Statistical Policy and Standards.

Center for Human Resource Research
1982 *National Longitudinal Surveys Handbook: 1982*. Center for Human Resource Research. Columbus: Ohio State University.

Dickinson, K.P., T.R. Johnson, and R.W. West
1984 An Analysis of the Impact of CETA programs on Participants' Earnings. Menlo Park, Calif.: SRI International.

Frankel, M.R.
1971 *Inference from Survey Samples: An Empirical Investigation*. Ann Arbor, Mich.: Survey Research Center.

Frankel, M.R., H.A. McWilliams, and B.D. Spencer
1971 *National Longitudinal Survey of Labor Force Behavior, Youth Survey: Technical Sampling Report*. Chicago, Ill.: National Opinion Research Center.

Hahn, A., and R. Lerman
1983 *The CETA Youth Employment Record: Representative Findings on the Effectiveness of Federal Strategies for Assisting Disadvantaged Youth*. Final Report to U.S. Department of Labor. Center for Employment and Income Studies. Waltham, Mass.: Brandeis University.

Hansen, M.H., W.N. Hurwitz, and W.G. Madow
1953 *Sample Survey Methods and Theory*. 2 Vols. New York: Wiley.

Kish, L.
1965 *Survey Sampling*. New York: Wiley.

Landis, J.R., and others
1982 A statistical methodology for analyzing data from a complex survey. *Vital and Health Statistics* 2(92).

Mathematica Policy Research
1984 *An Assessment of Alternative Comparison Group Methodologies for Evaluating Employment and Training Programs*. Princeton, N.J.: Mathematica Policy Research.

Moeller, J., R. Hayes, and I. Witt
1983 *Socioeconomic Impacts of Recent Government-Subsidized Employment and Training Programs on Youth*. Washington, D.C.: Policy Research Group.

Rubin, D.B.
1979 Using multivariate match sampling and regression adjustment to control bias in observational studies. *Journal of the American Statistical Association* 74:318-328.

SRI International

1984 Analysis of Impact of CETA Programs on Participants Earnings. Stanford, Calif.: SRI International.

Westat, Inc.

1980 Continuous Longitudinal Manpower Survey. Net Impact Report No. 1. Impact on 1977 Earnings of New FY 1976 CETA enrollees in Selected Program Activities. Draft. Rockville, Md.: Westat, Inc.

1982 Continuous Longitudinal Manpower Survey. Net Impact Report No. 2. Impact of CETA on 1978 Earnings: Participants Who Entered CETA During July 1976 Through June 1977. Draft. Rockville, Md.: Westat, Inc.

1984 Summary of Net Impact Results. Rockville, Md.: Westat, Inc.

COMMISSIONED PAPERS

Knowledge Development Under the Youth Employment and Demonstration Projects Act, 1977-1981

Richard F. Elmore

INTRODUCTION

In July and August of 1977, Congress passed and President Carter signed the Youth Employment and Demonstration Projects Act (YEDPA). The law substantially increased authorizations for two existing youth employment programs, the Job Corps and the Summer Youth Employment Program (SYEP). It added three new programs, Youth Community Conservation and Improvement Projects (YCCIP), the Youth Employment and Training Programs (YETP), and the Young Adult Conservation Corps (YACC). It also authorized a large-scale demonstration of strategies designed to encourage high-risk youths to stay in school, using guaranteed work as an incentive--the Youth Incentive Entitlement Pilot Projects (YIEPP). (Table 1 summarizes the target groups and activities included within these programs.)

In the fiscal year immediately prior to the passage of YEDPA, federal outlays for youth employment programs were about $955 million (Hahn, 1979). Over the next four fiscal years, 1978-1981, about $8 billion was spent on programs and about $500 million on research and development addressed to youth employment, serving about 1.5 million youths annually (see Tables 2 and 3). YEDPA was administered by a newly created Office of Youth Programs (OYP), which was located in the Employment and Training Administration (ETA) of the U.S. Department of Labor (DOL) and which relied on a large number of independent contractors, as well as state, local, and other federal agencies.

Included in the legislation authorizing YEDPA was a broad charge "to explore methods of dealing with the structural unemployment problems of the Nation's youth" and "to test the relative efficacy of different ways of dealing with these problems in different local contexts." This charge was backed by substantial discretionary

---

Richard F. Elmore is at the Graduate School of Public Affairs, University of Washington.

TABLE 1 Federal Youth Employment Programs, 1977-1981

Program	Target Group	Activity
Job Corps	16-21; economically disadvantaged	Residential centers; education, skill training, work experience, counseling, health care; stipends; centers administered in cooperation with other federal agencies, state and local governments, and non-profit organizations
Summer Youth Employment Program (SYEP)	14-21; economically disadvantaged	Work in public or private, nonprofit agencies; some educational enrichment
Youth Community Conservation and Improvement Projects (YCCIP)	16-21; unemployed; preference to economically disadvantaged	Work in community-planned public projects
Youth Incentive Entitlement Pilot Projects (YIEPP)	16-19; economically disadvantaged; 17 selected sites-- 7 large cities, 10 smaller cities	Two-year demonstration; guarantee of minimum wage, part-time work during school year, full-time work during summer; contingent on satisfactory performance in school and work
Young Adult Conservation Corps (YACC)	16-23; unemployed	Work for up to 1 year on conservation, public projects; by statute, 70 percent administered through interagency agreements with Departments of Interior and Agriculture, 30 percent through formula to states
Youth Employment and Training Programs (YETP)	14-21; at least 85 percent economically disadvantaged	Classroom or on-the-job training, work experience, pre-employment skills; administered through local prime sponsors; 22 percent set-aside for cooperative programs with local educational agencies

TABLE 2 Outlays for Federal Youth Employment Programs, Fiscal 1978-1981 (in millions of dollars)

	Fiscal			
Program	1978	1979	1980	1981
Job Corps	280	380	470	465
SYEP	670	660	721	769
YCCIP	61	103	122	0
YIEPP	March 1978-August 1980: 218			
YACC	139	273	234	174
YETP	294	556	695	719

SOURCE: Data from U.S. Department of Labor (1980a, 1981, 1982).

authority and money, granted to the secretary of labor and delegated to the Office of Youth Programs, to conduct research, demonstration, and evaluation activities around the structural unemployment problems of youths. This effort was described with the arresting phrase "knowledge development."

The youth employment knowledge development effort was remarkable in many respects: It was one of the largest short-term investments in social research and development ever undertaken by the federal government. Its scale and complexity dwarfed any research and development effort undertaken by the Department of Labor before or since. It generated a large body of research, evaluation, and practical knowledge, which is only now being sorted, assessed, and assimilated into policy and practice. It coincided with a sharp surge in political attention to youth employment problems, creating many opportunities for connecting research with policy. And it galvanized a broad-based national constituency of policy makers, researchers, and local practitioners, at least for a short time, around the problems of youth employment. These features argue for a retrospective look at the process.

This paper analyzes the conduct of the knowledge development effort, from its origins in congressional decision making, to its design, implementation, and results. The paper addresses five main questions:

(1) What congressional and executive expectations shaped the knowledge development process?

(2) How was the knowledge development process designed?

(3) How was the process organized and managed?

(4) How has the process influenced policy and practice in youth employment?

(5) What lessons can be learned from the process that might shape future large-scale research and development efforts in social policy?

Because the knowledge development effort was vast and the scope of this analysis is modest, the answers to these questions are necessarily

TABLE 3 Participation in Federal Youth Employment Programs, Fiscal 1978-1981 (headcounts)

Program	1978	1979	1980	1981
Job Corps	72,000	85,000	103,800	114,400
SYEP	1,009,300	888,000	800,000	774,000
YCCIP	28,700	38,500	43,000	38,400
YIEPP	March 1978-August 1980: 72,000			
YACC	51,900	67,200	68,000	68,000
YETP	359,200	413,600	463,000	393,700

SOURCE: Data from U.S. Department of Labor (1980a, 1981, 1982).

tentative and incomplete. But, even with these limitations, the paper provides an occasion to examine the broader consequences of large-scale investments in social research and development. It also provides a political and organizational complement to more methodologically oriented reviews of the evidence.

The YEDPA knowledge development effort raises questions that have run through federal investments in social research and development since at least the mid-1960s. Prior to that time--during the New Deal, for example--the unspoken assumption was that public money spent on remediation of social problems was effective simply by having been spent. In the 1930s, the National Youth Administration's employment programs and the Civilian Conservation Corps were assumed to have accomplished their purposes when federal money was transferred through public employment to unemployed young people.

In the 1960s, this view began to shift markedly. It was no longer adequate justification for public expenditures simply to pass money from the government to individuals who needed it; public expenditures had, in some way, to contribute to the long-term solution of basic structural problems in society--poverty, unemployment, crime, delinquency, and the like. Some argued that even this was not sufficient justification, proposing instead that expenditures be based on comparisons of their net returns to society, rather than just on their relationship to social problems.

This shift in perspective coincided with a marked increase in federal social expenditures and at least a five-fold increase in federal expenditures on social research and development (Rein and White, 1977). The dominant theme of social research and development in the 1960s and 1970s was the seemingly straightforward matter of "finding out what works" (Rivlin, 1971). The dominant analytic model was a combination of experimental method and economic analysis. Experimental method, which in its most rigorous form prescribes pre- and post-measurement coupled with random assignment of subjects to treatment and control groups, would provide the means of disentangling the effects of social programs from the effects of various other factors. Economic analysis would provide the means of attributing value to program effects and of assessing their net social benefit.

As the custodian of expertise and money in this effort, "the federal government should take the leadership in organizing, funding, and evaluating systematic experiments with various ways of delivering education, health, and other social services . . . trying out new methods in various places under various conditions" (Rivlin, 1971:86-87). The evidence emerging from these systematic experiments would inform public policy decisions. The underlying assumptions were that (1) knowledge of effects and net benefits was a key determinant of public policy decisions; (2) systematic knowledge, when marshaled in support of decisions, would be used by policy makers; and (3) better knowledge meant better decisions and more value to society from social expenditures.

This analytic model produced some notable successes--well-conceived and well-implemented experiments in income maintenance, health insurance, and housing subsidies--and some notable embarrassments--vaguely conceived and erratically implemented experiments in educational vouchers, compensatory education, and educational performance contracting, for example. The analytic model also began to find its way into federal evaluation requirements that accompanied categorical grants and federally sponsored research and demonstration activities under the umbrella of operating programs. In education, for example, a national Dissemination Review Panel was established to review evaluations of exemplary programs for methodological rigor and results and to "validate" those programs for broad-scale dissemination. Parallel patterns developed in delinquency prevention, employment, and mental health.

This analytic model had no sooner become a fixture of federal policy than experience began to surface a number of problems:

- Timing. Social experiments and evaluations, especially the well-conceived ones, took so long to produce results that they usually answered questions no longer being asked by policy makers. The demands of the political process were out of synch with what the experimental method could produce.
- The Nature of the Treatment. Most of the notable successes with social experimentation were with policies involving relatively simple cash-transfers (income maintenance, health insurance, and housing subsidies). Most of the notable failures were with policies involving complex changes in existing organizations, the creation of new organizations, or the delivery of highly individualized services.
- Organizational Complexity. The large-scale accumulation of knowledge about social problems turned out to require orchestrating competing political demands, marshaling money and expertise behind policy questions, and constructing organizations to deliver services and do research. The skills necessary for these activities were more akin to the skills of management than the skills of scientific inquiry. People who have the required management skills do not necessarily have the skills, interest, or commitment to scientific inquiry, and vice versa.

- Implementation. Complex interventions have to be implemented before they can be tested. Implementation requires skill and commitment from people whose main interest is in delivering services, not in "finding out what works." Implementation also requires organizational and administrative capacity--people and institutions who are ready to apply their practical knowledge to the problems raised by policymakers. These practical concerns often came as a shock to social scientists whose main concerns were methodological and theoretical.
- Variability and Robustness. The cash-transfer experiments seemed to produce findings that were robust from one setting to another, if not from one experiment to the next. Evaluations and experiments requiring complex organizational solutions and individualized services produced findings that were highly sensitive to setting--differences among sites were consistently greater than differences among treatments across sites.
- Small, Ambiguous Effects. The social interventions of the mid-1960s were justified politically in rhetoric that suggested broad-scale reform of society. The actual results of experiments and program evaluations showed small, often inconclusive effects. The interventions worked with some groups and not others; the effects were sometimes so small as to be of questionable practical significance; important sources of variation (site-to-site differences, for example) were often not included in the design of evaluations; and effects often did not persist over time.
- Methodological Uncertainty. Better-designed, more rigorous, more analytically sophisticated experiments and evaluations did not reduce the uncertainty and conflict surrounding policy decisions. Indeed, they often aggravated it. Serious discussions of important policy questions often got sidetracked into arcane debates over methodological decisions, analytic assumptions, and statistical techniques, leaving the intended consumers of the results confused. The most frequent conclusions of policy research were recommendations for more research. The research community seemed reluctant to apply the same benefit-cost calculus to its own work that it applied to social policy.
- Conflict Between Science and Practice. As the application of social science to social policy making proceeded, the breach widened between people who delivered services, on the one hand, and the people who conducted experiments and evaluations, on the other. Practitioners argued that the quantitative findings of rigorous research and evaluation were too abstract to be of any practical use, too insensitive to practical problems, and that experimentation and evaluation were expensive ornaments hung on social programs for the benefit of social scientists. Social scientists argued that, without a scientific basis, practice could not be justified to the public and that resistance to systematic analysis stemmed from the professional's usual hostility to external scrutiny.

It was impossible to engage in large-scale policy research, experimentation, or evaluation in the 1970s--or the 1980s, for that matter--without confronting these problems in one form or another. They were part of the baggage of systematic inquiry in the service of policymaking.

Out of these misgivings there began to emerge a different, more tempered view of the connection among systematic inquiry, policy, and practice. The utility of experimental method and economic analysis came to be defined in narrower terms. Rigorous social experimentation required relatively strong theory, analytic skill, time, money, and organizational capacity--conditions that could not be met in all instances. Social scientists began to acknowledge an explicit tradeoff between internal validity (the ability to distinguish treatment effects) and external validity (the ability to generalize effects beyond an experiment). The degree of experimental control required for a precise estimate of effects was to some degree inconsistent with the ability to transfer the treatment from an experimental setting to a practical operating environment. Policy analysts began to speak with more respect about the "ordinary knowledge" (Lindblom and Cohen, 1979), or practical understanding, necessary to make complex decisions and to get from an analytic result to a prescription for action. Views about the relationship among systematic inquiry, policy, and operating decisions became more elaborate and less hard edged.

Systematic inquiry, even when it met rigorous methodological standards, was rarely brought to bear on clearly specified decisions--legislative, budgetary, or administrative. But systematic inquiry did have longer-term, more diffuse effects on the conventional wisdom that policy makers used to define problems, on the way organizations were structured, on the directions administrators pushed their organizations, and on the way practitioners handled day-to-day problems in providing services. The shifts, in other words, were less a repudiation of the experimental/analytic model and more a domestication of it to political, organizational, and operating realities.

The Department of Labor had, by the mid-1970s, accumulated considerable capacity and experience in economic analysis and evaluation, although its experience with large-scale experimentation was more limited. The department's analytic functions in the employment and training area were the responsibility of the Office of the Assistant Secretary for Policy Evaluation and Research (ASPER) and, within the Employment and Training Administration, the Office of Policy Evaluation and Research (OPER). The Policy Evaluation and Research budget of DOL was consistently around $35 million a year between 1976 and 1980; over $20 million was in earmarked appropriations and about $15 million in discretionary funds (apart from YEDPA). The varied collection of state and local government agencies and community-based organizations that delivered employment and training services under the Comprehensive Employment and Training Act (CETA) had become acclimated to a relatively high level of federally required evaluation, but no less resistant to its costs and inconveniences. An array of external research and evaluation organizations had developed around DOL-sponsored evaluations, as well as a large array of university-based research organizations. Not much of this capacity for research and analysis, however, was focused specifically on youth employment--a matter that would become important with the passage of YEDPA.

The youth employment knowledge development effort commenced at a time, then, when federal investment in analysis, research, and evaluation related to employment had been relatively high for a number of years, when methodological and analytic sophistication were on the rise, when major uncertainties were surfacing about the role of systematic inquiry in the service of policy making, and when the administrative structure for employment programs had become acclimated to, if not totally accepting of, evaluation. The uncertainties that characterized policy analysis, research, and evaluation generally at that time were necessarily part of any effort to apply systematic inquiry to the youth employment problem.

Among the questions growing out of this larger context are the following:

- What constitutes "useful" knowledge? Is the utility of knowledge, and hence the value gained from investment in systematic inquiry, to be judged in strictly methodological and quantitative terms--that is, are "useful" results measures of specific impacts to which no alternative causal explanation can be offered under the methodological conventions of social science? Or is the utility of results more a matter of practical use--that is, "useful" results are those that are perceived to be helpful in solving political, administrative, and practical problems?
- What should be the relationship between the delivery of services and the discovery of effects? Is it the primary responsibility of government agencies to deliver services to people, consistent with the political decisions of elected officials? Or is their primary responsibility to "find out what works," consistent with the economic criterion of positive net benefit? Is it possible to accommodate the delivery of services and the measurement of effects within a single organizational structure? Should the delivery of services be constrained by the methodological conditions necessary to identify effects, or should methodological conditions be constrained by the practical necessities of delivering services?
- What are the political and organizational correlates of successful accumulation of knowledge? If the accumulation of knowledge about social problems requires orchestrating competing political demands, marshaling money and expertise behind policy questions, and constructing organizations to deliver services and do research, then how do we distinguish between better and worse ways of doing these things?
- What payoffs should we expect from large-scale research, demonstration, and evaluation activities? Should the payoffs be on the order of "solutions to the problem of youth unemployment"? Or is it sufficient to offer solutions, on the order of "ways to reduce the high school dropout rate" or "ways to impart employment skills," that offer constructive solutions to practical problems, but little hope of solving the overall problem?

The analysis that follows is divided into five main sections: (1) expectations about knowledge development on the part of Congress and the executive branch; (2) *design* of the knowledge development effort; (3) *organization and management* of the effort; (4) *influence* of the effort on policy and program; and (5) *guidance for the future* that might be gained from the knowledge development effort.

POLITICAL EXPECTATIONS

Shortly after the inauguration of President Carter in January 1977, several representatives of the new administration were summoned to a meeting on the Senate side of the Capitol Building. The Carter appointees were Bill Spring, from the White House Domestic Policy Staff; Ray Marshall, secretary of labor; Ernest Green, assistant secretary for employment and training; and Nik Edes, deputy undersecretary for legislative and intergovernmental affairs at the Labor Department. From the Senate was assembled a rare array of senior members. Among the Democrats were Henry Jackson, Washington; Hubert Humphrey, Minnesota; Edward Kennedy, Massachusetts; Alan Cranston, California; Harrison Williams, New Jersey; Gaylord Nelson, Wisconsin; and Jennings Randolph, West Virginia. Among the Republicans were Jacob Javits, New York, and Robert Stafford, Vermont.

According to Nik Edes and Richard Johnson, then staff director of Nelson's Senate Employment Subcommittee, the Senators delivered a simple message to the Carter appointees: A youth employment bill would be introduced in the Senate immediately, with or without administration support. The administration could collaborate or be left behind.

The reasons for the pressure were political. According to Johnson, "There were youth proposals coming from all over the Senate; they could have gone to [the] public works, interior, or labor [committees]. Javits sensed that the whole thing was about to come apart. Whichever committee got to the floor first with a proposal would get credit. He decided it was time to call a meeting. He told the administration, 'We're about to produce a piece of legislation. If you want in, now is the time'."

Spring, recently transplanted from the Senate Labor and Public Welfare Committee Staff to the White House, recalls, "It was a rescue effort by the Labor and Public Welfare Committee to maintain its jurisidiction. Javits [ranking member of the Labor and Public Welfare Committee] saw that Jackson [chair of the Interior Committee] and Randolph [chair of the Public Works Committee] were about to move, and understood that if something didn't happen quickly they were going to lose it."

Within weeks, Edes, Johnson, and Spring had drafted a proposal incorporating the special programs of the key Senators. This particular selection of staff was not accidental. Edes and Spring, representing the Carter administration, had only weeks before been members of the Senate staff--Edes working for Senator Williams, chair of Labor and Public Welfare, and Spring working for Senator Nelson, chair of the Employment Subcommittee. According to Spring, "It was the old Senate staff pulling together around an issue. There really wasn't an administration position, because the Carter White House hadn't gotten organized."

According to Johnson, "As far as the Senators were concerned, the ideas were simple. You needed to have better cooperation between the schools and the employment and training system. You needed to do something about dropouts. You needed to provide opportunities for kids in trouble with the schools to do useful, productive work and prepare themselves for employment." Jackson, Humphrey, and Randolph came of age politically in the New Deal. Their ideas about what young people needed were consistent with the New Deal view of employment in the service of conservation and public works. YACC and YCCIP were manifestations of this view. Nelson and Williams had a large political stake in maintaining their committee's jurisdiction over employment policy and assuring that the federal employment and training structure provided adequate access for youths. YETP was the solution to that problem. Javits's special interest was in the connection between the schools and the employment and training system. On the strength of Javits's interest, a provision was drafted requiring that a proportion of YETP funds (originally 15 percent, later 22 percent) be allocated to projects jointly involving local education agencies (LEAs) and CETA prime sponsors.

For the Carter administration the top domestic priority was dealing with persistent inflation and rising unemployment. Youth employment, per se, was not part of their early agenda. As one congressional staff member said, "They didn't have any hip-pocket proposals on youth employment coming out of the transition, so it was relatively easy for them to buy into whatever the Senate had to offer." On January 31, 1977, Carter proposed a $20 billion emergency economic stimulus package, composed of supplemental budget requests for fiscal 1977, to cover the 18-month period from April 1977 to September 1978. The package contained an $8 million addition to public service employment (PSE), $4 billion for public works jobs, over $5.5 billion in aid for local governments, and $1.5 billion for unspecified youth employment programs.

The administration's original intent was to implement its youth program administratively, without new legislative authority. Senate aide Richard Johnson said, "We told them, 'You can't do that on Capitol Hill, legislators want to pass legislation and get some visibility'." So on March 9, the administration followed with a youth employment message, containing a proposal that had been worked out jointly with the Senate. It requested authority for three new youth programs--YACC, YCCIP, YETP; it provided a set-aside of joint school-prime sponsor projects; and it provided that half the YETP funds would be distributed by formula to prime sponsors and the other half used to fund "innovative and experimental" programs at the discretion of the secretary of labor or his designee.

Explaining the purpose of the discretionary funding, Richard Johnson argued, "We [the Senate] had always been inclined to put rather generous discretionary funding into the employment programs because we recognized that the formulas for distributing money sometimes resulted in problems getting the money to the right constituencies." For the Senate, in other words, discretionary funding was a way of adjusting formula-funded programs to special geographical, political, or organizational interests.

In retrospect, according to DOL's Nik Edes, "leaving the House out of the early negotiations was a major tactical error." The administration's affinity for working with the Senate was understandable. Two key actors for the administration, Edes and Spring, were former Senate staff. Also, according to Spring, "The House got left out because the internal politics of the Senate were so delicate we were afraid we'd lose the whole thing if we tried to accommodate the interests of House members too."

When the House got wind of a Senate-administration proposal, they decided to move on their own youth employment bill. The late Carl Perkins, chair of the House Education and Labor Committee, and Augustus Hawkins, newly designated chair of the Employment Subcommittee, introduced the administration's youth employment bill on April 6 and then developed an alternative proposal. According to a member of the House staff, "The White House didn't have a lot of experience in these things; they said, 'Wait a minute, you can't develop your own bill; we already have a bill in.' We went ahead with our own proposal."

The Senate and House approaches differed in several respects. First, whereas the Senate proposal created new programs focused on youths, the House proposal amended Title III of CETA, a general grant of discretionary authority to the secretary of labor for research and demonstration projects. The Senate saw itself as initiating new, more or less permanent, youth employment programs. The House, by contrast, saw itself as initiating demonstration projects that would form the basis for later, more permanent programs. In a House staff member's words, "our philosophy was 'let a thousand flowers bloom,' and then come back after we'd had some experience and decide what was promising."

Another key Senate-House difference was the House's Youth Incentive Entitlement Pilot Projects (YIEPP). YIEPP was important politically to the House proposal because it originated from the Republican side. According to Nat Semple, minority staff to the House Employment Subcommittee, the idea had its origins long before 1977. "Marvin Esch [former Republican member from Michigan] liked to think in big terms. He had kids of his own and he was concerned about how to get kids to stay in school and how to get schools to respond to kids who might not be the greatest academically. We had a long discussion one evening after work over hamburgers and beer at the Hawk and Dove [a Capitol Hill eatery] and I started sketching out the ideas for entitlement on the tablecloth. The problem was how to get the Republicans to buy off on some kind of a job guarantee. We struck on the idea of a contract. The kids would have to agree to stay in school in return for a job. There would be rules and structure. We weren't offering something for nothing. The whole idea was basically very conservative: keep kids in school, promote the work ethic, make kids contract for benefits, etc. It had a lot of appeal to the Republicans." Esch ran for the Senate from Michigan in 1976 and lost. Semple took the entitlement proposal to Ronald Sarasin, moderate Republican from Connecticut, and Sarasin agreed to sponsor it.

A common element of all proposals was an initial 1-year authorization. The entire CETA package was due to expire in 1978. Everyone anticipated that youth employment would be integrated into CETA when the 1978 reauthorization occurred. Rather than putting youth programs on a different authorization schedule than the rest of CETA, there was substantial agreement that the new youth programs should be authorized for 1 year and then taken up again in 1978 with the reauthorization of CETA. In explaining why the proposal was couched in the language of demonstration projects, rather than new programs, the House Committee Report said, "The Committee approach allows for learning as much as we can in order that when CETA is reauthorized next year, the Committee will have a better idea as to what type (or types) of program(s) actually work" (U.S. Congress, House Committee on Education and Labor, 1977:4, also 9; hereafter House Report).

While the Senate version stressed bold, New-Deal-like solutions to the problems of youth employment, the hallmark of the House version was "learning what works." At several points in its report on the youth bill, the House Committee referred to the uncertainty of expert opinion about youth employment (House Report, 1977).

> Of all the witnesses that appeared before the Committee, not one had a definitive answer as to what would solve the problem of chronic youth unemployment. All agreed that a variety of methods should be tested and the educational system should be linked with whatever approach is finally agreed upon.

But if the committee was emphatic about "finding out what works," it was for the most part strategically vague about what that meant. YIEPP was the most clearly specified of the House proposals, and it left considerable ambiguity. The committee's advice about what it meant by "finding out what works" was couched in the following terms (House Report, 1977):

> In placing a major emphasis . . . on innovative and demonstration programs, the Committee intends that a broad range of activities be tested . . . to learn what works to remedy the structural nature of the youth employment problem and to meet the employment and training needs of specific target groups in the youth population. These activities include outreach, counseling, activities promoting education to work transition, labor market information, attainment of high school equivalency, job sampling, on-the-job training, supportive services, programs to overcome sex-stereotyping in job development and placement, outreach programs for minorities and women and other activities designed to improve the employability of youth.

This laundry list was indicative of the uncertainty that characterized both expert opinion and political judgment about the youth employment problem and its solutions in 1977 (see Hahn, 1979). There seemed to be consensus that the youth unemployment rate was too high, but little agreement on what an acceptable rate would be. There was consensus that unemployment was borne disproportionately by minority, especially black, youths, but little understanding of the relative importance of skills, basic education, family background, and discrimination in predicting minority youth unemployment. There was consensus that the time was ripe for political action, but little confidence in past solutions to youth unemployment and little specific agreement on what would constitute success.

Asked whether a more detailed analysis of the youth employment problem and its solutions might usefully have preceded a multi-billion dollar demonstration effort, one congressional staff member replied, "Are you kidding? When you get the kind of political weight behind a proposal that this one had--Jackson, Humphrey, Randolph, Javits, Hawkins--you don't say, 'Give us a couple of years and we'll come up with a proposal.' You move. Right now! You go with what you have and try to make sense of it as you go along."

Bill Spring, a veteran of employment legislation as a Senate staff member, observed, "We were coming out of a period extending from the old S-1 [a federal manpower bill] in 1960, through the Economic Opportunity Act of 1965, up to CETA, in which we had spent huge sums of money on work experience for the unemployed and disadvantaged." The evidence was now pretty clear that work experience had the smallest impact of anything that had been tried. But it wasn't clear what would work better. The House's uncertainty was well founded.

Nat Semple had a further explanation of how the youth proposals took shape. "When you ask most adults what to do about any problem with young people, they generalize from their own experience and from what they think is good for kids. Congressmen and Senators are no different. Some of them thought kids ought to be out working up a healthy sweat in the country, some thought they ought to be doing useful public deeds around town, some thought they ought to be staying in school, some thought they ought to be getting useful training to prepare them for jobs. The bill was an amalgamation of all the adult ideas about what's good for kids."

In the end, the Senate conceded reluctantly to the House's demonstration approach. In the Conference Report, which stated the terms of compromise between the House and Senate versions, the Senate accepted the House's language stating that the purpose of the law was the "establishment of pilot, demonstration and experimental programs to test the efficacy of different ways of dealing with the problem of youth unemployment," but stipulated that the statement of purpose also contain language "specifying that a variety of employment and training programs, as well as demonstration programs, are authorized" (U.S. Congress, 1977:35; hereafter Conference Report). As is usually the case, the Congress skirted conflict between two alternative purposes by opting for both.

While the Congress was strategically vague on the issue of "learning what works," it was more specific on a number of other issues. Both the House and Senate strongly emphasized the need to pay attention to in-school youths and the lack of coordination between the CETA system and the educational system at the local level. The Senate took the view that good in-school programs and strong CETA-education cooperation were "preventive medicine" against the more difficult problem of what to do about school dropouts (U.S. Congress, Senate Committee on Human Resources, 1977:10; hereafter Senate Report). The Senate saw the set-aside for CETA-education cooperation as the solution to this problem. The House observed that "perhaps the greatest weakness of most of the youth employment proposals that have been introduced in the current session is their failure to place any emphasis on in-school youth or on encouraging out-of-school youth to . . . [return to] school" (House Report, 1977:10). The House saw YIEPP as a way of speaking to this problem.

Another issue that acutely concerned both the Senate and the House was the wage and job displacement problem for adult workers that was associated with youth employment measures. Both versions included language requiring the payment of prevailing wages, rather than the minimum wage, to youths filling an existing position. The final version contained language encouraging prime sponsors to take the initiative in developing new and restructured job classifications, in cooperation with labor organizations, to accommodate youths. The Conference Report stressed that the wage standards in the law "seek to promote the interests of both youths and currently employed workers and to engage prime sponsors, employers, and labor organizations in a cooperative effort to expand opportunities" (Conference Report, 1977:40).

A related issue that did not arise explicitly in the youth employment bill, but lay behind it, was the youth subminimum wage. The idea of offering employers exemptions from the minimum wage for hiring youths had long been a popular conservative proposal for addressing youth unemployment. It was, however, anathema to labor organizations and liberal legislators, who saw it as a mechanism for eroding the minimum wage and promoting youth displacement of adult workers. The Senate and House versions dealt with the issue by diverting attention away from it. In the words of a House staff member, "A major advantage of the House bill was that it temporarily defused the youth subminimum wage. Earlier in 1977 a youth subminimum amendment to the Fair Labor Standards Act had failed by one vote in the House. The big advantage of the House bill was that it gave Republicans something constructive to vote for without raising the youth subminimum again."

Two final congressional concerns were maintenance of constituencies and intragovernmental coordination. The Department of Labor, in the administration of employment and training programs, had, partly by congressional request and partly by its own initiative, developed a broad network of working relations with a very diverse array of organizations. The CETA system was, of course, based on prime sponsors--units of state and local government charged with responsibility for administering federal employment and training funds. Prime sponsors, and the state and local government interest groups representing them (e.g., National Governors Conference, National Conference of Mayors, National Association of Counties), were expected to play a key role in any new program.

Prime sponsors, however, delivered only a fraction of CETA-funded services; the remainder were delivered by contractors, some locally based community groups, some affiliated with national organizations (e.g., Urban League, Opportunities Industrialization Centers), many of which had been in existence since the emergence of federally funded employment programs in the late 1950s. These community-based organizations (CBOs) were, and still are, an important part of the political constituency for federal employment and training. Their interests were expected to be represented in any new programs. In addition to these state and local constituencies, DOL also maintained working relations with a number of other federal agencies through a variety of congressionally mandated, cooperatively administered programs. Congress expected all these working relations, plus the newly mandated cooperative arrangements with local educational systems, to be carried over into the administration of youth employment programs.

These expectations were stated in explicit statutory language. The governors were given their own set-aside of 5 percent of total YEDPA funding for exemplary projects and coordinating activities at the state level. The secretary of labor was charged with implementing "cooperative arrangements with educational agencies," including "secondary schools, postsecondary educational institutions, and technical and trade schools." There was a directive to "give special consideration" to community-based organizations, such as "Opportunities Industrialization Centers, the National Urban League, SER-Jobs for Progress, Community Action Agencies, union-related organizations, employer-related non-profit organizations, and other similar organizations."

There were instructions to "consult, as appropriate, with the Secretary of Commerce, the Secretary of Health, Education, and Welfare [later Health and Human Services], the Secretary of Housing and Urban Development, the Secretary of Agriculture, the Director of the ACTION Agency, and the Director of the Community Services Administration." The rationale for these instructions was partly political--assuring that key constituencies would be included--and partly administrative--assuring that DOL would orchestrate the efforts of diverse federal agencies. In the words of Senate aide Richard Johnson, "The idea was that someone needed to pull together the pieces around a common theme of youth employment."

YEDPA, then, embodied a special convergence of congressional interests. It authorized bold new programs, but only for one year and only as part of the general CETA authority for demonstration projects. It gave DOL a broad charge to "find out what works" and substantial discretionary resources to do it, but tempered that grant with a 1-year authorization, limited guidance about what to focus on, and a reminder that it was delivering services at the same time it was running research and demonstration projects. It reminded DOL of its responsibilities for maintaining good relations with federal, state, and local constituencies in the process of mounting new programs. It clearly signaled that the Congress expected increased attention to in-school youths and to the connection between employment and training programs and local educational systems.

By singling out youth employment for special attention, though, Congress was significantly shifting its expectations for the employment and training delivery system. In 1973, with the passage of CETA, the Congress had altered the mode of delivery for employment and training programs by shifting from categorical to block grants. This shift in federal policy meant changing from a system in which the federal government gave grants directly to local service deliverers (community-based organizations, for example) to a system in which federal funds went to state and local officials, who exercised substantial administrative control over the allocation of federal funds to local deliverers. In simple terms this meant a dramatic expansion in the administrative complexity of the employment and training system. It put a premium on the indirect management of local delivery through state and local government organizations with their own political constituencies.

Under the previous system, youths were singled out for attention by categorical programs, notably the Neighborhood Youth Corps and the Job Corps. After CETA, the Job Corps and the Summer Youth Employment Program remained separately authorized, but the expectation was that state and local governments would make their own decisions about the appropriate mix of youth and adult programs within broad guidelines set by the federal government. An important part of the rationale for the change was that state and local governments knew more about the special needs of their areas than did the federal government, and therefore, they should exercise wide discretion in the use of federal funds.

With the passage of YEDPA, CETA prime sponsors saw a significant shift in federal policy, which many interpreted correctly as a "recategorization" of federal employment and training programs. While the youth programs brought new money, they also brought increased federal program requirements, reduced flexibility, political stresses entailed in focusing on one target group when others were perceived as equally needy, and with time, a more active management role from the federal Office of Youth Programs.

As indicated in Table 4, youths continued to participate at a relatively high rate in "regular" CETA programs at the same time they were receiving greater attention through YEDPA. This led many state and local administrators to believe that young people were receiving a disproportionate share of federal funds. Coupled with this recategorization, prime sponsors were also confronted with the demands of mounting large public service employment programs (see Table 4), participating in other DOL-initiated research and demonstration activities, and responding to increased DOL demands for better information on local decisions and their effects. Under the structure of indirect management, cooperation of state and local governments was a key element in the success of any federal venture, but singling youths out for special attention did not inspire unqualified state and local support.

TABLE 4 Participants Under Age 22 in CETA Programs Other than YEDPA, 1977-1981 (in percentages)

Program	1977	1978		1979	1980	1981
Title I, Employment Training (1973-1978)	52	49		[Moved to Title II, B&C]		
Title II, Public Service Employment (structural)	60	21	II-B&C, employment training	48	48	45
			II-D, public service employment (structural)	23	36	26
Title VI, Public Service Employment (cyclical)	64	21		22	24	24

SOURCE: Data from U.S. Department of Labor (1978-1982).

Executive Branch Perspective

Within the executive branch at the federal level, expectations for the new youth employment effort were quite modest. YEDPA was seen as a congressional initiative. The Carter administration was happy to accommodate it, especially insofar as it dove-tailed with the President's economic stimulus package. But, between January 1977 and the early spring of 1979, the administration had bigger fish to fry. The administration's top domestic priorities were, first, reducing unemployment and inflation, and second, reforming the welfare system.

An important feature of the economic stimulus program was publicly subsidized employment. The economic stimulus package provided for an increase in CETA-funded public service employment (PSE) from about 300,000 to 725,000 people. At its peak, in spring 1978, over 750,000 people were in PSE positions. In 1979, public service jobs were reduced to under 600,000, but the rapid buildup and the high turnover of PSE participants administered a severe shock to the CETA system (U.S. Department of Labor, 1978 and 1979; hereafter DOL). The shock had two important effects. First, it focused a large amount of attention at the local level on finding public sector jobs to create employment. Second, and perhaps more importantly, it created a permanent and indelible notion among the public and politicians that CETA was a public employment program, not an employment and training program. After 1977, the fate of CETA would hang on the uses and abuses of PSE, not on its less-visible training programs.

The hallmark of the Carter welfare reform package was the use of employment to reduce welfare dependency. Called the Program for Better Jobs and Income, the proposal promised "to provide a work or training opportunity for an employable adult in every needy family that includes a child under age 18" (DOL, 1978:123; see also Lynn, 1981a). This objective was to be achieved by coupling welfare benefits with work requirements and by relying on the employment and training system to absorb large numbers of welfare beneficiaries. Quite apart from the political difficulties of selling such a proposal and the practical difficulties of administering it, the welfare reform proposal posed a gargantuan job of interdepartmental coordination at the federal level.

The Department of Health, Education, and Welfare (HEW), with its prickly and combative Secretary Joseph Califano, considered itself to be the custodian of federal welfare policy. The Department of Labor (DOL) saw in the Carter proposal an opportunity to become a central actor in a large new policy area. The White House Domestic Policy Staff was saddled with the role of orchestrating this complicated bureaucratic minuet. The Carter welfare reform proposal eventually failed to get congressional approval, but not before it had consumed more than two years of the time of top policy staff and political leadership within the administration.

The net effect of these two domestic priorities on the youth employment effort was, first, to push YEDPA into the background within DOL and the executive branch generally, and second, to create an intense competition between YEDPA-funded activities and other CETA activities at the local level. This condition persisted until early 1979, when the tide began to turn. During the 1978 CETA reauthorization debate in Congress, there was an ugly and protracted discussion of local misuses of public service employment funds, which had serious repercussions for CETA and its political supporters. In the words of Bill Spring, White House Domestic Policy Staff member, "We came within an inch of losing the whole thing."

In an effort to refocus attention on the positive side, the Department of Labor began increasingly to emphasize its youth employment efforts. By late 1978, the Carter welfare reform proposal had gotten bogged down in a tangle of interdepartmental, congressional, and interest group fights that eventually led to its demise. At that point, in search of a domestic initiative that would serve to focus positive attention on the administration in the 1980 election, the White House staff turned to youth employment. A staff member within the executive branch, who was a persistent critic of DOL's youth employment activities, recalls a meeting in the fall of 1978. "There was a proposal floating for still more money for youth employment, and I was making the usual arguments against it with Bill Spring when, as a I recall, Bert Carp [a Domestic Policy Staff member] walked into the room and said, 'Youth employment is going to be the administration's number one domestic priority in the 1980 election.' At that point, I knew the discussion was over."

In late 1978, the President appointed the Vice President's Task Force on Youth Employment, chaired by then-Vice President Walter Mondale, and charged it with developing a new youth initiative. In roughly 18 months, then, youth employment moved from being a back-burner, congressionally initiated enterprise to being a top domestic priority in the President's bid for reelection, and the administration's only new domestic initiative. These shifting expectations were to have significant effects on the administration of YEDPA.

DESIGN OF KNOWLEDGE DEVELOPMENT EFFORT

The administration lost little time in responding to the congressional youth initiative. In July 1977, before YEDPA had been signed by the President, Secretary Marshall created the Office of Youth Programs (OYP) within the Employment and Training Administration (ETA) and appointed Robert Taggart to be its administrator. The new OYP was allocated 49 positions to carry out its charge; of these, 16 were existing Job Corps positions, and 27 of the remaining 33 positions were "mandatory hires," or transfers from other parts of DOL, over which the new administrator had no control. This left Taggart with 6 positions to fill. Of the total OYP positions, 14 were allocated to research, demonstration, and evaluation, and the remainder were allocated to program administration.

The magnitude of the task confronting Taggart was extraordinary. The final terms of the congressional charge involved roughly doubling the size of the Job Corps, as well as enriching the program's education and training components; increasing the Summer Youth Employment Program; launching the Youth Incentive Entitlement Pilot Projects, a $200-million-plus, multi-site demonstration; launching three new operating programs--YCCIP, YACC, and YETP; and, most importantly, deciding how to use the discretionary funding allocated to the secretary under the terms of YEDPA.

It was from the last of these--discretionary funding--that the "knowledge development agenda" grew. The YEDPA funding formula was of byzantine complexity: it began by taking the total appropriation for YIEPP, YCCIP, and YETP and dividing it into three parts: 15 percent went to YIEPP, 15 percent to YCCIP; and the remaining 70 percent to YETP. YACC was funded separately. Of the 70 percent allocated to YETP, three-quarters went by formula to prime sponsors; the remaining one-quarter, after some small deductions for special allocations to states, and set-asides for migrant workers and native Americans, went to the secretary for discretionary allocations. Depending on appropriation levels and how one defined "discretionary," this formula would deliver between $300 and $500 million in discretionary money to OYP in fiscal 1978, 1979, and 1980. The low end of this range included only those funds authorized for discretionary allocation under the formula; the high end included YIEPP, which had to be used for a specific programmatic purpose, but which could be allocated at the discretion of the secretary.

The term "discretionary" was deliberately ambiguous. As noted earlier, Congress viewed discretionary funds as a way of adjusting formula allocations to constituency interests and congressional expectations. With the implementation of YEDPA, however, the term "discretionary" became synonymous with the knowledge development agenda. This change in emphasis was the result of Taggart's initiative, not the explicit direction of Congress.

While Congress's intent was to "find out what works," and discretionary funds were clearly to play a major role in meeting that intent, it was by no means a foregone conclusion that the use of discretionary funds would be organized around a centrally administered research and development agenda. The House's expectations were that YIEPP would be run as a multi-site demonstration and that the remainder of YEDPA would, in a House staff member's words, be allocated on the principle of "let a thousand flowers bloom." According to Senate aide Richard Johnson, "Knowledge development was Bob Taggart's method for bringing some sort of order out of the collection of programs he had to administer. In fact, we had an embarrassing interlude with Bob right after the bill passed when word got back to the Hill that he was calling YEDPA a 'disorganized hodge-podge' of programs--a little insensitive to the Members' interests. To his credit, though, he seized the initiative. He saw the discretionary money as an opportunity to be innovative and systematic, and pull things together under a larger strategy. That was all right by us."

Centralizing Control of YEDPA in OYP

Within DOL, it was far from a foregone conclusion that OYP would control all program operations, research, development, and evaluation activities associated with YEDPA. There were at least three alternatives to this model. The usual approach would have been for the secretary to delegate operating authority to OYP and responsibility for research, development, and evaluation to the Office of Policy Evaluation and Research in the Employment and Training Administration or jointly to OPER and to the Office of the Assistant Secretary for Policy Evaluation and Research in the Office of the Secretary.

Another alternative would have been to allocate the bulk of the discretionary money to prime sponsors under a series of large-scale grant competitions, and then to require the recipients of those grants--state and local agencies--to develop research and evaluation plans and relations with research and evaluation organizations as part of their projects. A third option might have been for OYP and OPER jointly to develop plans for a limited number of large-scale demonstrations or social experiments, along the lines suggested by YIEPP, to manage those projects jointly, and to contract with external organizations to evaluate the projects.

The decision to locate all responsibility for program operations, research, development, and evaluation in OYP was taken at Taggart's initiative. "No money is ever really 'discretionary,'" Taggart said. "It's all got to be used to serve a variety of missions--political, administrative, and research. The question was how much control would we exercise over the discretionary money and whether we would divide it up within the Department. There were a number of people who wanted to put it all out by administrative formula to prime sponsors; even Entitlement could have been sent out on a modified formula basis. I got a quick sign-off [from the secretary] immediately tying it all up [in OYP]."

Taggart's aggressiveness in seizing control of the discretionary funds did not endear him to others in DOL, but neither did it create serious bureaucratic problems. "The scale of this thing [YEDPA] was unlike anything the department had ever done," Taggart argues. "ORD [the Office of Research and Development, the unit within OPER with responsibility for demonstrations] had a budget of around [$20] million a year. We were talking about putting something like $200 million out in the first year. The existing structure just wasn't designed to do that." While others within DOL perceived Taggart as aggressive, brash, and abrasive, they did not actively oppose his design to control discretionary funding after the secretary's approval and, in fact, assisted him in certain ways. Howard Rosen, then head of ORD, and Seymour Brandwein, then head of OPE (Office of Policy Evaluation, the other branch of OPER), worked with Taggart. Rosen helped OYP in contracting for outside services; Brandwein offered advice on research questions and negotiating the DOL bureaucracy. One ORD staff member, speculating about why Rosen did not fight for more control of YEDPA discretionary funds, said, "I think Rosen . . . saw YEDPA as more of an institutional capacity, delivery, building effort and thus didn't see it as a proper ORD effort." The same relationship held with ASPER, in the Office of the Secretary. Robert Lerman, then an ASPER staff member, recalls, "ASPER was much more preoccupied with welfare reform, PSE, and [the] Humphrey-Hawkins [full employment proposal] than with youth employment; the youth programs were less than highest priority, and because of that Taggart was given much freer rein."

Taggart used another device to solidify his position within DOL. He contracted with OPER and ASPER to carry out pieces of the knowledge development agenda. ASPER was given money to conduct basic research on the nature of the youth employment problem, which it used to contract for a number of studies. OPER, in addition to helping with contracting, was given funds to extend two major longitudinal surveys to provide more detailed coverage of youth problems and to fund other youth-related activities. OPER, on its own, also conducted an extensive evaluation of the Job Corps and an assessment of YEDPA implementation by local prime sponsors.

By establishing this relationship Taggart deflected any oversight they may have conducted on his research and development activities. According to ASPER's Lerman, "Our relationship with OYP tied us up a little bit. It's kind of hard to fully oversee another operation when you can't even spend your own money. We were all understaffed and that worked to Bob's advantage. Besides, Bob is a doer; he doesn't wait, he acts. He just took control and pushed ahead, and no one was there to tell him otherwise." These sentiments were endorsed by an OPER administrator, who said, "We were reluctant to take on new responsibilities beyond our capacity or to get into wrangling with Taggart, with whom [many of us] agreed anyway."

Taggart's tactics for dealing with ASPER and OPER also avoided a chronic organizational problem that DOL had been grappling with as early as 1973. ASPER was staffed mainly by economists, who usually took short-term appointments of two-to-four years, often on leave from academic appointments, and whose main interest was the application of economic analysis to policy decisions at the departmental and presidential level. OPER, on the other hand, was staffed mainly by career civil servants whose background was in employment programs and whose main interest was the program monitoring and evaluations aimed at improving operations. These institutional loyalties tended to reinforce mutual stereotypes within the department, not always accurate, that ASPER was populated by "academic economists" and OPER by "program people."

Another characterization of the difference, offered by an OPER administrator, was that the "academics believed that conceptualizing an evaluation was the key issue . . . with little regard for feasibility or . . . implementation." The split resulted in delay and disagreement around the planning for the national evaluation of CETA in 1974 (Hargrove and Dean, 1980). A major effect of Taggart's move to centralize program operations, research, development, and evaluation in OYP, then, was to avoid a major source of past institutional conflict within DOL.

Another possible source of external scrutiny over OYP might have been the Office of Management and Budget (OMB) in the Executive Office of the President, which monitors the research and evaluation activities of federal agencies. The OMB examiner for YEDPA, a critic of OYP's knowledge development efforts, explains why OMB exercised little influence or oversight: "I came on board just after YEDPA passed. It was clear that Taggart was unwilling to take any outside advice he didn't agree with. No one within DOL was willing to try to corral him. It was a clear case of institutional default. From OMB's point of view, if the money comes to the agency from Congress on a set-aside basis, we have no direct way to reach it. We stay out of the secretary's internal business and focus on the budget and the President's program. We are not in a position to tell people in the departments what kind of research to do; we can try to cajole and persuade, but we don't have much influence. One thing is for sure, though. Allowing Taggart to grab control of the discretionary money was a very significant decision; once that happened, we all lost our ability to influence what was going on."

Taggart, not surprisingly, saw the stakes differently. "We had enormous resources, basically no staff, multiple objectives, and very little time. People in the department didn't pay much attention to us; they were consumed by PSE. We ended up being the only program in the department combining policy, research, and operations. The law said, first, get the money to people in the right places, second, achieve some kind of coordination between federal agencies--take a leading role, and third, do something about the relationship between schools and employment programs. The research focus was my way of exercising administrative control. My view of the purpose was to establish an institutional base for youth employment programs and make it work to serve youths. You had to achieve large-scale institutional change, and the way to do that was to put the money out there and then use monitoring, evaluation, demonstration, and research to pull the system along."

In other words, centralized control was Taggart's way of putting research into the service of management. "Finding out what works" was useful only insofar as it was instrumental in building a structure of institutions focused on youth employment.

Taggart was young--in his thirties--relatively inexperienced as an administrator, very ambitious, and possessed of strong ideas about the role of research in policy making and administration. His major experience before coming to OYP had been as a researcher, having worked with Sar Levitan on a number of studies of federal employment and poverty programs. From his prior work and his early experience in DOL, he evolved some working principles. One of these was that all program effects are marginal. "Whatever we deliver as a program is one of many factors operating on kids, and not the most important one at that. The best you can expect is a 10 percent effect. You can never separate participant, site, and program effects."

Another principle was deep skepticism about employment research and the researchers who produce it. "The problem with the research community is that they don't know substance, institutions, and procedures--most employment research is useless if you need to figure out what to do [with it]." This skepticism about research was matched by an equal skepticism about the competence and knowledge of the people who operate employment programs. "You can't rely on practitioners to find the solutions. . . . Their perspective is too narrow." A final principle, which evolved with experience, was that the content of the program was less important in determining outcomes than the skill with which the program was implemented. "Everything's good that's done good."

Together, these principles comprised an instrumental view of the relationship among research, evaluation, management, and policy. The purpose of research and evaluation was not simply, or even primarily, to inform policy decisions. It was to create a management structure, a structure for judging and rewarding performance, for developing programs, for dispensing money and assistance, and for weeding out ineffective practices and replacing them with effective ones. You couldn't evaluate until the institutional structure was there to develop and implement a program. Whatever was implemented was highly dependent on the limited skills of the people who worked in the delivery system. The function of research and evaluation was, first, to create a management structure and, second, to nudge local administrators by stages into better performance. From this perspective, separating the research, development, and evaluation purposes of YEDPA from its programmatic purposes would have been unthinkable. For Taggart, research, development, and evaluation were, primarily, tools of management and, secondarily, mechanisms for systematic inquiry or policy making.

The Knowledge Development Plans

The first attempt to design the research, development, and evaluation component of YEDPA was embodied in the 1978 Knowledge Development Plan, written soon after Taggart became administrator of OYP. The term "knowledge development" is credited to Joe Seiler, a veteran of OPER and an assistant to Taggart (DOL, 1980e:9). This first knowledge development plan was, in Taggart's words, a "seat-of-the-pants" document, crafted from two sources. "First, we took the law and broke it into pieces that were consistent with congressional intent. Next, I gave my best reading of the issues in youth policy that had developed since the 60s."

The body of the 1978 plan closely followed the structure of YEDPA and its funding formula. It included descriptions of research, development, and evaluation activities to be undertaken in each of the mandated programs--YACC, YIEPP, YCCIP, and YETP--and a careful statement of how those activities would correspond to congressional expectations. The plan also contained the first list of eight cross-cutting research issues (Table 5). This list later evolved into 15 questions (Table 6) and, in the 1979 plan, into 16 issues.

The first plan was mute on the practical question of how those broad, cross-cutting questions would be answered by the specific studies taking place under each congressionally mandated program. The 1979 plan made the conceptual connections between broad issues and specific studies clearer by organizing specific studies around broader issues, keyed to time lines (DOL, 1980c). But throughout the plans there was no explicit discussion of who would draw disparate studies together and how that would be done.

The fact that these issues were left unspecified, however, did not mean that Taggart had no solutions to them. One solution was to contract with an outside research organization, the Center for Employment and Income Studies (CEIS; later consolidated into the Center for Human Resources) at Brandeis University, to help OYP exercise lateral influence over the design of evaluations in separate projects and to help synthesize results. But the primary solution, for Taggart, was that he understood connections among pieces of the design. On this matter, Taggart is unapologetic. "I'm the only one who knows how the pieces of the process fit together because I'm the one who designed it."

The practical problems of mounting a large-scale research and development enterprise were another major theme in the knowledge development plans--problems of management, organization, time, and methodology. The main management problem was how to mount good demonstration programs without "locking resources into an operational mode such that it would be difficult to transfer them in the future to approaches which prove more effective." Another management problem was that YEDPA was intended to provide jobs as well as research on what works, which created "a tradeoff between careful research design and rapid implementation to maximize economic impacts." The main organizational problem was limited staff at the federal, regional, and local levels and "resources scattered over myriad projects."

TABLE 5 Research Questions, 1978 Knowledge Development Plan

---

1. Does school retention and completion increase the future employability of potential dropouts and the disadvantaged, and is subsidized employment a mechanism for increasing school retention and completion?

2. Can the school-to-work transition process be improved? This involves several related questions. Are new institutional arrangements feasible and warranted? Will increased labor market information and assistance expedite the transition? Can employer subsidies and other private sector approaches create new transition routes?

3. Work experience has become the primary emphasis of youth programs. Jobs are to be "useful" and "meaningful," i. e., having both a worthwhile output and an impact on future careers. Are the jobs productive? Which ones are most "meaningful" and how can they be identified?

4. Does structured, disciplined work experience have as much or more impact on future employability than other human resource development services or a combination of services and employment?

5. Are there better approaches or delivery mechanisms for the types of career development, employment, and training services which are currently being offered?

6. To what extent are short-run interventions and outcomes related to longer-term impacts during adulthood? Put in another way, how do public interventions affect the maturation and development process?

7. What works best and for whom? This is a perpetual and critically important question of matching services with needs. To answer this, it is first necessary to develop a set of performance or outcome standards which determine what does and does not work. The second step is to try to determine who realizes these benefits under which programs and approaches.

8. What are the costs of fully employing youths? Unemployment rates for youths are of questionable meaning because of the substantial number of "discouraged" individuals who are outside the labor force but would be attracted to minimum-wage jobs. Others are working less than the desired number of hours. It is important to determine the extent of the job deficit and the costs of eliminating it.

SOURCE: U.S. Department of Labor (1980b).

TABLE 6 Knowledge Development Research Questions, 1979-1980

---

1. Does school retention and completion increase the future employability of potential dropouts and the disadvantaged, and are employment and training services linked to education an effective mechanism for increasing school rentention and completion?

2. Can the school-to-work transition process be improved? This involves several related questions. Are new institutional arrangements feasible and warranted? Will increased labor market information and assistance expedite the transition? Can new transition routes be created?

3. Given the fact that work experience has become the primary emphasis of youth programs, are the jobs productive, which ones are most "meaningful" and how can they be improved?

4. Does structured, disciplined work exprience have as much or more impact on future employability than other human resource development services or a combination of services and employment, i. e., should public policy emphasize straight work experience, combinations of work and training and other services, or should training, education, and supportive services be emphasized?

5. Are there better approaches and delivery mechanisms for the types of career development, employment, and training services which are currently being offered?

6. To what extent are short-run interventions and outcomes related to longer-term impacts on employability during adulthood? Put in another way, how much can public interventions redirect the developmental process?

7. What works best for whom? What performance or outcome standards are best to determine what does and does not work for youths? Which youths with what characteristics benefit from which programs and approaches?

8. What is the universe of need for youth programs? What is the cost of fully employing youths? How many would take jobs if they were available and how many hours of employment do they require?

9. What approaches and procedures can be used to involve the private sector in employment and training efforts and to increase the placement of the participants in private sector jobs? How effective are those approaches in accessing new jobs and providing better career tracks for youths? Are they preferable to public sector approaches?

10. What is the best mix of enrollees in terms of age and income status? Will poor youths benefit from interaction with nondisadvantaged youths or with older persons? Is targeting achieved and is it a worthwhile notion?

11. What arrangements can be made to increase the duration of employment and training interventions and to assure that participants realize lifetime benefits? Will youths demonstrate the commitment and consistency to make these long-term investments pay off?

TABLE 6 (Continued)

---

12. What strategies are most important at different points in the lives of youths? Must training be delayed until greater maturity is achieved? Are employment and training programs a way of inducing maturity?

13. How can separate youth programs be better integrated to improve administration and to provide more comprehensive services to youths? To what extent are the programs already integrated at the local level?

14. How do the problems of significant youth segments differ, including those of migrants, rural youths, the handicapped, offenders, young women with children, runaway, and the like? Are special needs groups and special problems better handled by mainstreaming or by separate programs for those groups?

15. How can the lessons from knowledge development activities best be transferred to improve existing youth programs? How can the institutional change process be promoted? What are the learning curves on new programs and how much can they be expected to improve with time?

SOURCE: U.S. Department of Labor (1980a).

The main problem with time initially was that, with the exception of YACC, YEDPA programs were authorized only through October of 1978. This meant that, while many research questions required long-term studies, commitments could only be made for one year. After October 1978, when YEDPA was reauthorized through 1980, there were additional demands to provide timely results, through the summer and fall of 1979, for the policy development effort operating under the Vice President's Task Force for Youth Employment, which culminated with a proposal to the Congress in January of 1980. The main methodological problem was how to devise studies that could provide verifiable results within the constraints of program, organization, and time (DOL, 1980c).

A sense of how time constraints drove design decisions can be gleaned from the 1979 Knowledge Development Plan (DOL, 1980b:111):

> Three of the four major YEDPA programs--YETP, YCCIP, and YIEPP--are authorized only through fiscal 1980. It is anticipated that by that time many of the critical issues underlying youth policy will be resolved to a greater degree so that major decisions can be made. For recommendations to be formulated and legislation passed by the end of fiscal 1980, these must be based on results which will be available at the latest by fall of 1979.
>
> The . . . schedule for the implementation of 1979 discretionary activities makes it quite apparent that there will only be

> limited information from these projects by this time. Even on a rapid implementation schedule, most will not complete a design and contracting until the end of the first quarter of fiscal 1979. The results of the first half year's operations can hardly be tabulated and analyzed by the end of 1979 and only interim process findings will be available reflecting mainly start-up difficulties. Most of the information yield for the end-of-1979 decisions will have to come from projects implemented in fiscal 1978. Here too, the findings are limited to early results and developments rather than long-term impacts.

A less ambitious and committed person than Taggart would have concluded from this analysis that congressional and executive expectations for results from YEDPA were simply incompatible with time and resource constraints. Taggart did not draw this conclusion: Whatever could be produced, would be produced.

Key Design Features

As the knowledge development strategy evolved, certain design features emerged. Among these were (1) complexity in the range of issues, program activities, research projects, and products; (2) relatively heavy emphasis, in early phases, on process information, rather than outcome data; (3) wide variability in research design, method, and type of results from one knowledge development activity to another; and (4) major changes over time.

The knowledge development plans were complex largely because the congressional and executive expectations that accompanied YEDPA were complex. Granting the complexity of expectations, though, a common theme among both Taggart's harshest critics and strongest allies was that he did little to control the complexity of the enterprise. Robert Lerman, ASPER staff member, recalls that in late 1978, when Taggart convened a conference at Reston, Virginia to discuss knowledge development efforts, "It struck me that the plan just had too many questions. He [Taggart] listened carefully to people's reservations and he thought about the problems they raised, but early on he bought into a big multi-demonstration view of what he was doing, which didn't accommodate much to clarity in design. Things didn't seem to have a clear logical structure to them."

Andrew Hahn, who worked with Leonard Hausman in the Brandeis Center for Employment and Income Studies as part of the technical assistance function of OYP, recalls, "Len Hausman argued that the first plan was too complex. He said it could be organized around three aspects of the youth labor market--labor supply, or how to affect the skills and attributes that kids bring to employers; labor demand, or how to influence employers' demand for kids through various kinds of incentives; and intermediary linkages, or how to smooth out the transition to the work."

Taggart resisted this advice. "There were probably two reasons why he resisted," Hahn continues. "First, he had a hard time prioritizing.

Bob always thought in long, complicated lists, rather than in simpler frameworks. Also, it may have been that he deliberately wanted an inelegant design; by keeping the agenda complex, he maintained control and kept [Arnold] Packer [assistant secretary for policy, evaluation, and research], Brandwein, Rosen [from OPER], and the White House off his back." The net result of this complexity, says Hahn, who is a strong advocate of the knowledge development process, was "to encumber the design with a huge number of second-and third-order questions that were often brilliant and insightful but totally confusing to anybody but Bob."

The second reason why Taggart resisted Hausman's advice was that the early results of knowledge development were heavily weighted toward descriptions of the process by which projects were developed and implemented in various sites. This characteristic caused considerable friction between Taggart and, among others, the Office of Management and Budget. The OMB examiner for YEDPA, reflecting a characteristic institutional bias of OMB, said, "I expressed very strong reservations from the beginning about how it was developing, particularly about the large amount of money being spent on studies that didn't produce outcome data. OMB likes to see good, strong impact evaluations. Taggart didn't see it that way. He had his political constituency to protect. So most of the stuff he produced was very uninteresting to us."

The reasons for the emphasis on process data were fourfold. First, OYP was under pressure to produce results, but lacked the time to mount programs, let them mature, and then measure their effects. The next best thing, from OYP's perspective, was to build into the knowledge development process extensive information about the process by which programs were implemented. Or in Taggart's words, "In the first year and a half, our problem was how to do research when what was actually going on was start-up and implementation."

Second, the relatively heavy emphasis on process information in the early stages was consistent with Taggart's view of research and evaluation as an instrument of management control. Process information may not have been useful to OMB in making government-wide allocation decisions, but it was valuable intelligence to Taggart in his attempt to create and manage a youth employment delivery system. Moreover, by asking for process information, Taggart was communicating that he placed a high priority on creating an infrastructure to mount, administer, and evaluate youth programs.

Third, the wide variability in design, method, and type of results from one knowledge development project to another meant that there was no straightforward way to bring specific results to bear on cross-cutting questions. Separate projects were contracted through a variety of organizational arrangements, discussed below, and decisions about the research and evaluation design for each project were worked out, case by case, by Taggart and the OYP staff. While there was an overall "design," in the sense that individual projects were related to a broader set of policy questions, there was no mechanism for assuring that the design decisions of one project were consistent with those of other projects or with some overall set of methodological criteria. In some instances--YIEPP, for example--design decisions were argued through with the responsible organization in a detailed way and with an explicit analysis of their methodological consequences.

In other instances--typically, joint projects with other federal agencies--design decisions were allowed to evolve according to the preferences of the responsible organizations, or were not addressed explicitly at all. In still other instances--the creation of large-scale data bases or the adaptation of existing data bases to youth questions, for example--there was a high level of delegation to the responsible organization, with review and comment by OYP. Variability, then, was partly a function of the complexity of the issues, programs, projects, and products that the knowledge development plans focused on and the organizations that were used to translate those plans into action.

But variability was also a function of Taggart's own lack of enthusiasm for consistency and rigor in methodology. He did not believe that focusing on methodological rigor and consistency, at the expense of other objectives, would pay off, either in new knowledge or in better programs. "People complain, after the fact, on a study-by-study basis, about things like the lack of adequate comparison groups," Taggart argues. "S---! At least we had comparison groups in a lot of studies. That was more than anyone else had done on that scale before. We introduced as much methodological rigor as we could, even though I believed, and still do, that it wouldn't work. What you're doing, when you apply fancy research methods to projects like the ones we had early in the program, is researching ineffectuality, not intervention. The fact of the matter is that people don't know what to do. All you're discovering is that they don't."

For Taggart, the primary questions were developmental, not methodological. "None of this research will yield anything if people don't know what they're doing. What you need to do is to give each part of the delivery system a piece of the action, use monitoring and evaluation to generate competence, pick up the threads running through the system to get a broad understanding of what makes effective programs, and then get states and locals to make decisions about who gets what and get them to monitor and enforce." Questions of capacity, organization, and management were prior to questions of design; research methods were instrumental to the development of a delivery system.

Finally, the overall design of the knowledge development effort and the design of specific studies changed markedly over time. For example, the YIEPP demonstration started by testing the effect of a fully subsidized work guarantee on school attendance, school completion, and short-term employment. About halfway into the demonstration, the design was changed to accommodate variable subsidies, on the expectation that Congress would want to know whether a less expensive program would have positive effects. Also, it became clear after YIEPP commenced that assuring school attendance through employment guarantees was not necessarily a clear benefit to young people if the the school program was not adapted to their needs.

Well into the demonstration, then, attention shifted to providing better educational programming for YIEPP participants. Another example of a significant design shift was the introduction in 1979 of the Consolidated Youth Employment Program (CYEP) demonstration in nine prime sponsor areas. The purpose of CYEP was to test the consolidation of YETP, YCCIP, and SYEP grants into a single grant directed at multiple purposes. The project was based on congressional and executive expectations that the separate youth programs authorized under YEDPA would be consolidated in the 1980 reauthorization (DOL, 1980c:162-163).

The YIEPP example indicates how shifts in design can be stimulated by external expectations and by discoveries of weaknesses in program design. The CYEP example shows how design is a function of the political agenda. In both instances, though, changes in design raise the issue of whether it is better to stick to a single, well-specified set of projects for as long as it takes to get results, or whether designs should be adjusted to external changes and internal discoveries. A strictly methodological view would argue for holding projects constant until results are clear, since "finding out what works" depends on delivering a uniform treatment and controlling for alternative explanations of program effects. A developmental view, however, argues for making adaptations whenever they are required to improve program design and adapt to changing expectations. The knowledge development plans clearly embodied the developmental view.

Design, then, meant two distinctly different things in the knowledge development plans. First, it meant accommodating congressional, executive, and institutional interests involved in the youth employment problem in some sort of overall scheme and using that scheme to develop an institutional base for youth programs. Second, it meant, in the more conventional methodological sense, designing specific projects to deliver specific results on specific issues. Methodological questions were clearly instrumental to institutional development. There is a third meaning of design, which was not explicitly represented in the knowledge development plans. That is the integration of specific findings into some overall set of cross-cutting questions. The lack of this kind of design was the result of Taggart's strongly centralized view of this role and of the complexity of the issues incorporated into YEDPA.

ORGANIZATION AND MANAGEMENT

The magnitude of the organization and management problems confronting Taggart and his OYP staff in the fall of 1977 have already been sketched: Launch three new national programs (YCCIP, YETP, YACC), launch one national demonstration program (YIEPP), expand and enrich two existing youth programs (Job Corps and SYEP), and allocate over $200 million in discretionary research and development funds. At a minimum, launching new programs would entail writing the basic rules that would govern state and local administration, or in the case of YACC, negotiating the necessary interagency agreements that would result in other agencies writing the basic rules. Taggart estimates that he wrote, or supervised the writing of, about 40,000 pages of program guidelines in the first year.

Launching a nationwide demonstration, like YIEPP, is an exercise in politics, administration, and research: The political element comes from the fact that, unlike the formula grant programs, only a limited number of localities--17 eventually in the case of YIEPP--can participate. Which localities apply and which are eventually selected are matters of considerable political sensitivity. Administratively, the problem is how to get state and local organizations, mainly in the business of delivering employment and training services, to agree to participate in fixed-term research and development efforts. The research problem is devising and implementing a design that will answer policy questions within the operating constraints imposed by the existing delivery system. Allocating discretionary money, as we have seen, would entail defining questions responsive to congressional and executive interests, elaborating those questions into plans for discrete projects, and turning those plans into operating programs and designs.

Another way of illustrating the magnitude of the organization and management problems posed by YEDPA is to focus on the organization and management problems involved in the allocation of discretionary funds. If the average discretionary project, defined as one attempt to mount, operate, and evaluate an idea in one site, were to cost $500,000 over the course of two-and-a-half years, there would be roughly 1,000 projects. If one were to assume that OYP would have 20 full-time staff available to focus exclusively on discretionary activities--an extremely generous assumption, given the office's other responsibilities--each staff member would have responsibility for roughly 50 projects. Moreover, this example takes account only of the oversight necessary to mount, operate, and evaluate projects. It does not include the effort necessary to mount broad-scale data collection across projects, to oversee the reporting of data, and to synthesize the results of disparate projects into general conclusions.

The administrative feasibility of the knowledge development effort was dubious, then, under even the most generous interpretation of OYP's staff capacity. But, according to a number of observers, including Taggart, the quality of OYP staff fell short of the best. With the exception of a limited number of staff, perhaps three or four, whom Taggart had recruited from the outside or from positions elsewhere in DOL, OYP staff were neither trained for nor particularly interested in research and evaluation. "They were basically program people," said one individual who worked closely with OYP staff, "and not the best program people at that." Sensitivity to research design questions, the ability to work with contractors on complex research issues, and an awareness of the broader consequences of specific research decisions were attributes that, according to most observers, were in short supply among OYP staff.

One of the central puzzles of the knowledge development effort was why, given the enormous federal investment and the risks involved in poor execution, OYP did not hire more highly qualified staff. At least two explanations have been advanced. One explanation is that federal personnel requirements do not allow agencies to respond flexibly to large new projects with high short-term requirements for people with specific skills. The personnel system is designed to supply and maintain a stable career work force, not to meet peak-load demands of large-scale research and development projects. Hence, OYP was initially staffed by career employees transferred from other DOL programs, and Taggart's requests for additional staff were met with the reply that OYP's needs had been met.

Another explanation is that the DOL budget office and OMB deliberately used staffing as a way of showing their disapproval of Taggart's abrasive, autonomous, highly political style of management and the lack of methodological clarity in the knowledge development design. One executive branch budget analyst said, "That's how a number of actors within DOL and OMB got at Taggart. None of us could effectively control his financial resources, but we could [control] his employment resources. Both the department and OMB gave his requests each year for more staff very short shrift--even though it was manifestly clear he was way understaffed." Furthermore, the analyst argued, "Taggart never submitted a clear, workload-based research design that we could use to evaluate his requests."

OMB's formal position on Taggart's requests was that knowledge development should be staffed by OPER, and that OYP staff should focus on program operations. Behind this formal position, though, was a strong distaste for Taggart's unabashed empire building, which was shared by DOL budget staff. A budget analyst observed, "Note that when [Tim] Barnicle [Taggart's successor as head of OYP] took over he immediately got an OYP [personnel] increase--that's because he knew how to play ball. . . . There are many weapons in bureaucratic warfare." Whatever the explanation, OYP's staff was a serious, some would say fatal, constraint on its ability to mount the knowledge development effort.

These constraints, coupled with the congressional charge to forge federal interagency connections and to rely on community-based organizations, quickly led Taggart to "management by remote control" or "indirect management" of the knowledge development effort (see Salamon, 1981). In Taggart's words, "It takes as much time to process a $5 million contract as it does a $100,000 contract." Given a choice between managing thousands of contracts in the hundreds of thousands of dollars or dozens of multi-million dollar contracts, there was no contest in Taggart's mind. The basic plan was to get the money out of OYP as quickly as possible in a series of large chunks; to use existing organizations, or to create new ones, outside OYP/DOL to manage discrete pieces of the knowledge develop effort; and to create capacity, also outside OYP, to monitor, assist, and manage relationships among the pieces.

In its basic form, this organizational scheme was not unlike the modern corporate conglomerate. It was a collection of free-standing enterprises, each with one or more "product lines," each with its own set of projects, clients, and outputs, held together by contractual relations with the center. The function of the center was not to manage projects, clients, and outputs, but to see that the constituent enterprises were following through on their contractual obligation to manage those things themselves.

As with all forms of organization, this one has its characteristic strengths and weaknesses. Its main strength is that it reduced the span of control at the center by roughly a factor of 10--from potentially thousands of separate projects to, as it turned out, something over 100. The main weaknesses of this organizational scheme are that, first, its success depends almost totally on strong management capacity in its constituent enterprises, and second, that the structure itself contains no obvious solution to management failures in constituent enterprises.

When problems develop in the pieces of a corporate conglomerate, central management either replaces the management of those enterprises or sells them outright. These solutions are less feasible in the public sector. More importantly, though, the constituent pieces of a conglomerate--public or private--are relatively immune to central control of their internal operations, even when they are poorly managed. The slightest increase in management control from the center can create an enormous overload of central management. For this reason, among others, corporate management has tended more recently to move away from conglomerates and toward organizational schemes that permit "tight" central management of finance and output targets, coupled with "loose" central management of internal organization and operations (Peters and Waterman, 1982).

Taggart's strategy of indirect management depended on pulling at least five distinctly different types of organizational arrangements into a single conglomerate structure. Table 7, drawn from OYP's knowledge development projects for fiscal 1978 and 1979, illustrates these organizational arrangements.

Organizational Arrangements

Intermediaries

The use of intermediaries was an outgrowth of DOL's prior experience with the Manpower Demonstration Research Corporation (MDRC). The brainchild of a federal interagency task force, aided by Ford Foundation support, MDRC had designed, implemented, and evaluated a national demonstration of supported work as a solution to welfare dependency (Lowry, 1979). Because of the extremely short time lines involved in launching YIEPP, MDRC emerged as the most likely candidate to manage that demonstration. If the MDRC model could work with the entitlement project, why not try it with others, Taggart reasoned. Hence, in November 1977, the Corporation for Public/Private Ventures (CPPV) was established to handle demonstrations of private sector youth employment; in January 1978, Youthwork was established to handle exemplary in-school employment programs; and in May 1978, the Corporation for Youth Enterprises (CYE) was established, through an interagency agreement with the Community Services Administration (CSA), to manage demonstrations of youth-run enterprises.

The role of intermediaries in knowledge development has to be understood in connection with Taggart's instrumental view of research

TABLE 7 Selected Knowledge Development Activities

Organization	Amount (fiscal 1978-1979)	Tasks
Intermediaries		
Manpower Development and Research Corporation (MDRC)	$115,000,000 (1978) 107,100,000 (1979)	Design YIEPP application guidelines; review applications; design evaluation;) analyze results; 17 sites
Corporation for Public/Private Ventures (CPPV)	8,656,872 (1978)	Develop, test, document programs for private sector employment
	10,172,243 (1978) 678,360 (1979)	Replicate community home repair program; assess its effectiveness
Youthwork	19,505,055 (1978) 2,188,358 (1979)	Identify exemplary in-school programs; design application guidelines; review and recommend local projects; assess effectiveness; 66 projects
Corporation for Youth Enterprises (CYE), through interagency agreements with Community Service Administration and Department of Commerce	1,420,000 (1978)	Organize, assist, and support creation of youth-run enterprises; design demonstration projects, assess effectiveness; 7 projects
Interagency agreements		
ACTION	$8,000,000 (1979)	Test feasibility of national youth service--community internships; 1 project
	1,311,402 (1979)	Test feasibility of transferring urban community service project to rural setting; 1 project
	1,298,704 (1979)	Test feasibility of one-on-one volunteers in assisting youths to find employment; 14 projects
Community Services Administration (CSA)	4,000,000 (1978-1979)	Test feasibility of youth employment in rural housing programs; in collaboration with Department of Agriculture; 13 sites
	1,200,000 (1978) 400,000 (1979)	Test feasibility and effectiveness of year-round program for out-of-school youths in community development projects; 3 projects

TABLE 7 (Continued)

Organization	Amount (fiscal 1978-1979)	Tasks
Health, Education, and Welfare (HEW)	1,500,000 (1979)	Test feasibilty of incorporating youth employment and training into HEW-run Runaway Youth Centers; 11 projects
	1,051,000 (1979)	Establish, support and test effectiveness projects to link post-secondary educational institutions to CETA agencies; 20 projects; administered by Fund for the Improvement of Post-Secondary Education (FIPSE)
	4,777,700 (1978) 317,792 (1979)	Test feasibility of replicating and evaluate effectiveness of Career Intern Program in Opportunities Industrialization Center sites; 4 sites; administered by National Institute of Education (NIE)
	1,000,000 (1979)	Test feasibility and effectiveness of vocational education linked to summer work; 6 projects; administered by Bureau of Occupational and Adult Education
	632,600 (1979)	Part-time work for 1,000 Upward Bound participants; 9 projects; administered by Bureau of Higher and Continuing Education
Department of Energy	359,025 (1979)	Test feasibility and effectiveness of summer program of education and work experience in energy field
Intraagency projects (within DOL)		
Office of Policy Evaluation and Research (OPER)	3,999,967 (1978) 2,900,000 (1979)	Expand National Longitudinal Survey (NLS)
	800,000 (1978) 1,408,000 (1979)	Expand Continuous Longitudinal Manpower Survey (CLMS) to asess impact of YCCIP and YETP on youths

	362,000 (1978)	Process evaluation of local implementation of YEDPA; contracted to National Council on Employment Policy
Assistant Secretary for Policy Evaluation and Research (ASPER)	$265,265 (1978) 59,322 (1979)	Basic research on youth employment; contracted to UCLA, National Bureau of Economic Research, and various other organizations
External staff support outside DOL		
Brandeis University	250,000 (1978) 775,651 (1979)	Technical assistance in research design to exemplary projects; processes for retrieval, dissemination, and utilization of findings
National Council on Employment Policy	76,294 (1978)	Review and analysis of selected program activities, including state-of-the-art review of programs of disadvantaged youths and assessment of work-education councils
Constituency support		
U.S. Conference of Mayors	168,100 (1978)	Identify exemplary programs; provide technical assistance to prime sponsors
National Association of Counties	130,170 (1978) 35,000 (1979)	Identify exemplary programs; provide technical assistance to prime sponsors
National Governors Association	102,763 (1978)	Identify model state-run programs
National Urban League Women's Bureau SER-JOBS for Progress USES RTP National Puerto Rican Forum National Council of Negro Women National Council of LaRaza	8,262,633 (1978) 1,315,945 (1979)	Demonstration projects on participation of community-based organzations in school-work linkages

SOURCE: U.S. Department of Labor (1980b).

and his developmental view of how to approach the youth employment problem. The task was not just to demonstrate that certain programs operating in certain settings could work, but more importantly, to create a large-scale constituency of organizations committed to making certain programs work in certain settings. Later, Taggart (1980:15) would describe his purposes as follows:

> The aim of the involvement strategy was to build up the expertise for the involved groups and institutions to provide assistance in the replication of specific proven models under an incentive grant structure, as well as intensive technical assistance on specific substantive components of youth programming. . . .

Without this institutional infrastructure, there would be no capacity to deliver whatever "solutions" emerged from the knowledge development process. The investments in intermediaries, then, were partly investments in research and development and partly investments in institutional capacity. Andrew Hahn, from Brandeis, puts the problem this way: "When you go to do research and demonstration in the educational system, you've got a lot of established organizations who can create curriculum, train, test, and evaluate. Before YEDPA, there was no capacity like that in the youth employment area, just a collection of small entrepreneurs and a big employment and training delivery system focused mainly on adult programs."

Intermediaries were a short-term capital investment in a longer-term problem of institutional capacity. They were also a high-risk investment. With the exception of MDRC, none of the intermediaries existed prior to YEDPA, nor were they managed or staffed by people who had experience in similar settings. Consequently, as one might expect, CPPV, Youthwork, and CYE made their early decisions on an opportunistic, trial-and-error basis that produced a predictable mix of successes and errors (Lowry, 1979).

Youthwork, for example, recruited its staff disproportionately from the education community, giving it little credibility with CETA prime sponsors. When this became clear, the organization adjusted, but lost precious time in the process. All the intermediary organizations, with the exception of MDRC, had difficulty attracting and holding qualified research specialists, and this fact showed up in the quality of their initial plans. CPPV managed to recruit qualified staff, but its relative inexperience in management created start-up problems. Youthwork had a high level of internal turnover in its first two years, which undermined its ability to develop research expertise. CYE was slow in developing and never managed to attract and hold strong research staff.

Interagency Agreements

Interagency agreements were an outgrowth of congressional expectations that DOL would "pull together the pieces" of the federal government around the youth employment problem. The portfolio of interagency projects was substantial and reflected a number of agendas. The ACTION projects focused on youth community service, consistent with the objectives of YCCIP. The CSA projects also focused on youth community service, but with a strong emphasis on operations through local community organizations spawned under the federal antipoverty program of the 1960s. The HEW projects focused on connections between local employment and training programs and secondary or postsecondary institutions--a key congressional concern. The Department of Energy project focused on drawing disadvantaged youths into new careers in the energy field.

The interagency projects returned little in the way of structured research and evaluation, for reasons that are relatively clear. While OYP often referred to its federal collaborators as playing the role of prime sponsors, the facts were that OYP could exercise virtually no control over the projects they administered after the interagency agreements were signed. The agencies were neither creatures of DOL--as prime sponsors were--nor full-fledged contractors--as intermediaries were. They were free-standing federal agencies with independent authority. Hence, if they lacked the capacity to do systematic research, or if they disagreed with the demands that research and evaluation imposed on their discretion, there was little OYP could do to force their cooperation. Moreover, since the purpose of interagency agreements, from the congressional point of view, was to cement internal relations within the federal government, it was not necessarily in the interests of OYP to provoke embarrassing interagency conflicts that would be difficult to explain to Congress.

Intraagency Projects

Intraagency projects, as noted above, served an important internal objective by stabilizing OYP's relationship with ASPER and OPER. But two equally important additional purposes of these projects were, first, to develop a basic research constituency for youth employment among academics, and second, to assure that youth employment issues were adequately addressed in established longitudinal data bases, like the National Longitudinal Survey and the Continuous Longitudinal Manpower Survey.

In their own way, the intraagency projects were among the most successful in the knowledge development process. They involved relatively low-cost, finite, well-defined tasks; they could build on established institutional capacity (e.g., the National Bureau of Economic Research, the National Council on Employment Policy); and they had relatively self-explanatory payoffs. But for all their appeal in specificity and feasibility, these projects were not very valuable in political terms. Better research and more complete data about youth employment were useful in dealing with Congress only if it could also be demonstrated that DOL was "doing something" about the problems it was documenting.

External Staff Support

External staff support was a direct outgrowth of limited staff capacity within OYP. The key organization was the Brandeis Center for Employment and Income Studies. CEIS had an intentionally broad and ambiguous charge: "(1) To provide technical research design guidance to the national array of experimental and demonstration projects implemented under YEDPA, and (2) to develop administration processes for the retrieval, dissemination and policy utilization of research findings and other knowledge development products of these discretionary projects" (DOL, 1980b:278). These responsibilities overlapped those of a number of other organizations, including the Educational Testing Service's (ETS) development of a Standard Assessment System (SAS), the design and evaluation functions of the intermediaries, and a number of other individual projects with their own evaluations.

But if CEIS's role was ambiguous in a formal sense, its practical function was much less so. CEIS staff were the only source of "lateral intelligence" in the complex array of organizations spawned by OYP. All the other organizations were producing "vertical intelligence," in the sense that they were assigned projects with specialized target groups and particular programs. As noted above, this meant that the design of the knowledge development effort, if it was to exist at all, depended on the ability to make cross-cutting conclusions from disparate projects.

In its evaluation consulting and technical assistance role, CEIS was not just trying to improve the quality of project evaluations (a difficult task by itself), it was also gathering intelligence about what the developing delivery system looked like across a variety of localities and projects. CEIS also performed the function of convening periodic conferences to review design decisions, interim results, and practical lessons. In the absence of these activities, there was no formal mechanism for getting people involved in the knowledge development process to talk to each other about their results. While the lateral intelligence function is hard to specify in formal terms, and while one could argue that under the best of circumstances it would have been performed inside OYP, it was a practical necessity, given OYP's staff capacity and the organizational complexity of the knowledge development effort.

Another important external support function was provided by the Educational Testing Service's Standard Assessment System. The initial idea behind SAS was plausible. ETS would develop a single battery of instruments, composed of measures of client background characteristics, educational measures, and employment measures, which would be administered to a large sample of YEDPA demonstration project participants, before and after their participation, and would generate a data base that could be used to analyze effects across sites and programs. This battery of instruments would then be administered by prime sponsors as part of the routine requirements that accompany YEDPA-funded demonstration projects. The results would be collected, compiled, and analyzed by ETS, but also made available to others for special studies.

By most estimates, the SAS was less than a complete success. One problem had to do with conflicting expectations about its use. "People got very confused about the purpose of the SAS," said CEIS's Andrew Hahn. "ETS was never intended to be the evaluator. The idea was to create a large data base and make ETS the repository." But because ETS was cast in the role of developing the SAS, explaining it to program administrators, and collecting data, it became identified as an evaluator, whether that was its role or not.

This led to a second problem, which was conflict between ETS and program operators over the use of the SAS. "Program people hated it," Hahn recalls, "and it was very difficult to get their cooperation in administering it." A third problem was ETS's lack of experience with the employment and training system, a problem it shared with a number of other educational organizations that got involved in YEDPA projects. Schools are relatively acclimated to periodic testing, even though principals and teachers resist it. They are also accustomed to ETS as a prominent institution in the testing field. Most delivery-level organizations in the employment and training system had had little or no experience with testing and saw no particular reason to cooperate. ETS's experience did little to prepare it for these practical problems.

A final problem was disagreement over the design and content of the survey. In retrospect, a number of people saw gaps in the data and in ETS's analysis of it, but those gaps were not clear when initial designs were presented and approved. Taggart explains, "I delegated the design of the SAS internally and never reviewed the actual content of the instruments before they went out. That was about the only thing I didn't review in detail. When the first results came back, I went through the ceiling--they were not what we needed at all--and read the riot act to the staff and ETS. From that point on, we had a constant battle to try and turn it around."

Constituency Support

Constituency support projects were designed to make good on Congress's expectation that client groups, community-based organizations, and intergovernmental constituencies would be involved and consulted in the implementation of YEDPA programs. The mayors', counties', and governors' associations were important in maintaining any political support for any future youth employment activities, since they were the host governments for CETA prime sponsors. In addition, they had a strong incentive to resist separation of youth programs for other employment and training activities, because they constituted a "recategorization" of CETA and a retreat on the initial broad grant of discretion that accompanied CETA. Putting these organizations to work identifying exemplary youth programs in their jurisdictions, even if it did not produce much in the way of research, was a useful way of giving them some ownership in YEDPA.

Constituency and client groups, like the Urban League and SER, were key to development of a youth employment system in two respects. They were the national interest groups for their local community organizations and therefore wielded some political influence in Washington. In addition, though, their local organizations were often the only legitimate route of entry into the minority community. Where prime sponsors and local school systems were identified with the dominant local political system, community-based organizations were an important alternative way of reaching communities that might not be well connected to that system. None of the constituency support projects was distinguished for its research and development value, but their political value was apparent.

For Taggart (1980:10), the payoff for investing in constituency support lay more in the creation and management of a delivery system than in the research it generated:

> Rather than passively reacting to the pressure of interest groups, an active and conscious involvement strategy was adopted from the outset which sought to identify the complete range of institutions that could and should be involved, their areas of possible comparative advantage and interest, and then to utilize these institutions in structured demonstration projects where their effectiveness could be tested. The knowledge development plan was, in a sense, a protective system; to get funding, institutions had to adapt to the design and structure of demonstration approaches. The overlay of research requirements and outside evaluation agents was a disciplining force, serving a monitoring and management function which would not otherwise have been possible given limited staffing in the Office of Youth Programs.

The range of projects described in Table 7, as wide as it is, constitutes only a very small sample of the total universe of activities funded under YEDPA discretionary authority. Hence, it does not, by itself, give a complete picture of either the variety of projects or the complexity of the organization and management problems confronted by Taggart and the OYP staff. The selection of 27 projects in Table 7 is a small fraction of the 127 projects listed as knowledge development activities for fiscal 1978 and 1979. Roughly 30 OYP staff are listed as project monitors, but 15 of those oversaw 100 projects, which often amounted to an individual responsibility for $20-$30 million. Even if the staff had been well prepared for their research and development roles, their ability to attend to detailed project decisions would have been severely limited.

It is also important to note that while discretionary funds were used to finance knowledge development activities, they were not exclusively, or even primarily, used for research and evaluation. In fact, by DOL's estimate, 88 percent of total discretionary funds was spent on employment and training services, 3.3 percent on basic research, .6 percent on evaluation of regular programs, 5.3 percent on evaluation of demonstration projects, and 2.8 percent on technical assistance to program operators. About 30 percent of discretionary funds, outside YIEPP, was directed through other agencies of the federal government to interagency projects. Close to 78 percent of discretionary funds was allocated to prime sponsors, 18 percent directly to community-based organizations, and 6 percent to an assortment of other organizations, including schools and private employers (DOL, 1980b; also DOL, 1981).

The message these figures drive home is that, regardless of how important research and evaluation were to the mission of knowledge development, service delivery was the main activity performed with discretionary money and the organizations performing that service delivery were not, by their nature, sympathetic to research and evaluation.

Organization and management problems were not limited just to the organizational alliances spawned by discretionary funding. There were at least two other spheres that demanded active and continuous attention. One of these spheres was the CETA delivery system, represented by prime sponsors and their local contractors. The other was what might be called the "policy system," composed of actors outside OYP who were consumers of knowledge development products, some of whom were involved in developing the administration's youth employment proposal.

The CETA Delivery System

The CETA delivery system was both the operating base for most YEDPA activities and the major source of practical implementation problems faced in the knowledge development process. It would have been possible, at least in theory, to run demonstration projects outside the CETA system, by creating "hot-house" projects designed, run, and evaluated by researchers. This approach was antithetical to both the legislative charge that accompanied YEDPA and to Taggart's strategy for using knowledge development as a management tool. By insisting that the knowledge development process be run through the existing delivery system, Congress and OYP achieved a degree of involvement and practical experience that would otherwise have been impossible, but they also bought all the political and administrative problems that accompany that system.

Prime sponsors represented units of local government; the administrators of local prime sponsors, as well as their local constituent organizations, were a political force in their communities and in Congress. When knowledge development imposed demands on local prime sponsors that they considered to be unreasonable, and when OYP refused to concede, prime sponsors had alternative routes of political access through which to get the results they wanted. Erik Butler, a former administrator of youth programs in Boston and later executive director of the Vice President's Task Force on Youth Employment said, "When MDRC came to talk to us about the Entitlement project, they were talking research, while we were talking program. The issue was how to accommodate their interests and ours." Marion Pines, a nationally visible employment and training administrator from Baltimore, took her complaints about the reporting and administrative demands of the entitlement project directly to Congress, making a plea for more local control over design decisions. This tension between national objectives and local political and administrative realities was played out in a number of settings on a number of issues.

Taggart cites OYP's attempt to improve the Summer Youth Employment Program (SYEP) as one of his most illuminating confrontations with the CETA delivery system. "Summer Enrichment," as it came to be known, was an important component of Taggart's strategy for using knowledge development to influence the quality of youth programs. As is clear from Tables 2 and 3, SYEP accounted (and still does) for a large proportion of both outlays and participants in federal youth employment programs. Since the mid-1960s, it had come to be regarded cynically by politicians and administrators largely as an income support program or, in the language of the street, "fire insurance."

Taggart's approach was to focus on developing better jobs for the summer program and adding an educational component. "In the first round, we tried to rewrite the program requirements to include better monitoring of jobs and an education component, assuming that if we asked for them and made it explicit in evaluation requirements we would get it. We completely misjudged the capacity of prime sponsors. What we discovered was that there was rot at the bottom of the pyramid. The problem was bad management; they wouldn't have known how to do it even if they had wanted to. So we put some discretionary money behind it, got some intermediaries involved in creating and implementing programs, and focused on the problem of poor management at the local level. Over time, we began to see results. But the problem was that we wasted a year finding out that the delivery system couldn't respond to the demands we were putting on it."

The problem of local management capacity also surfaced in a YIEPP, where MDRC was required to make heavy demands on local prime sponsors to implement a specialized information system to track entitlement participants, and in the implementation of the Standard Assessment System, where prime sponsors and other administrators of discretionary projects often balked at the additional effort required to administer the complex battery of instruments. Taggart's approach to both the political entrepreneurship and management capacity problems was to rely heavily on external support staff and intermediaries both to buffer OYP from political pressure and to deliver much-needed advice.

The Policy System

The policy system posed another set of problems. Taggart's strategy of creating an extensive network of external organizational alliances also meant that it had to be consulted, reinforced, and accommodated. The major problem with asking for advice from your constituents, of course, is that you often get it. And, more often than not, it comes in the form of contradictory messages.

The most prominent example of consultation was the conference held in October 1978, convened by the Brandeis center, at Reston, Virginia. The conference occurred early in the development of the knowledge development process, a year after the passage of YEDPA. Its nominal purpose was to bring the research and development organizations involved in the process together to discuss common methodological problems and to develop a familiarity with the overall objectives of the process. As one might expect, the conference turned out to be a collection of distinct presentations on specific projects, followed by discussions in which participants argued positions based as much on their institutional and methodological biases as on their interest in knowledge development.

Arnold Packer, DOL assistant secretary for policy evaluation and research, commenting on a presentation of the entitlement research design, argued, "We must be sure when we're spending the public's money that we have a scientifically solid approach and the ability to accept or reject specific hypotheses which are recognized as the ones that are implicit in what policy makers are doing and thinking about in such programs." Policy relevance and methodological rigor, it seems, were equally important. But so was timeliness. "Will the results be available by the time legislation must be drafted next year?" Packer asked. "January 1980 is the scheduled date for submitting administrative recommendations. When the budget goes up a year from this January, if we are going to ask for any money to continue youth programs, the legislation has got to accompany the budget" (DOL, 1980e:25). How MDRC, local entitlement projects, and OYP were to accommodate to this schedule was their problem, not the problem of the administration's policy planners.

John Palmer, an employment specialist from the Brookings Institution, took advantage of the occasion to counsel moderation on methodological questions. Commenting on YETP discretionary projects, he said, "Some of the discussion seems to suggest that we're going to be able to vary components or individual elements of these program structures and see what difference it makes. I'm dubious that that's going to be possible in most cases. I just don't think that the methodology or the resources that are being brought to bear are going to permit that to happen. You're just not going to get effective answers to those questions in the strict research sense. You're going to get important answers out of the more qualitative analyses that are being done and from the hunches that have been made."

Palmer continued by counseling attention to what he called "first order questions," such as, "Was it feasible simply to mount and execute the program under the design conditions we are trying to accomplish? Who is being served? Are we reaching the target population? Is it working, in some sense, at that level?" (DOL, 1980e:56). These questions were several notches below those considered important by other participants.

Donald Nichols, an ASPER staff member, took strong exception to the lack of methodological rigor he observed in many knowledge development projects. "I want to emphasize the need for consistency across these various programs," he argued. "We want to strive to bring about some kind of consistency, so that we can not only make comparisons within each of these projects, but so we'll also be able to make pretty good comparisons of one approach against another." He continued, "A feature common to most of the demonstrations being discussed . . . is that they are not experiments with random assignment [to] groups and the like.

They lack the pure classical experimental approach in that all the results are hedged ahead of time. Some of the researchers sound a great deal more like advocates rather than scientists. It may well be that advocates run better programs . . . but it's probably not a good model for getting research results on something you might think you could replicate on a large scale" (DOL, 1980e:58).

Vernon Briggs, from the Cornell Labor and Industrial Relations faculty, issued a rebuttal. "I feel we're missing what is perhaps the greatest contribution of these programs in the discussion over classical research design. It seems to me that the major overriding focus behind all this is changing institutions in desired directions." He continued, "I think, when you consider the whole range of employment training programs, the results of the research and the demonstrations are used by a number of different actors and, depending on where those actors sit, they have different agendas. I would go as far as to say that I think that a typical legislator would probably think more in terms of whether services are actually delivered than in terms of subtle assessment of impacts" (DOL, 1980e:60-61).

Othello Poulard, director of the Center for Community Change, based in Washington, D.C., delivered an even more fundamental critique of rigorous research. "As a practitioner, I can say there isn't that much mystery, as might be suggested, with further discoveries in uncovered truth. I wish that were the problem. It would be easy if the accumulation of a few more facts would provide the remedy. But the residual of so many basic societal patterns and attitudes, political stances and the like, seem to be so obviously at the heart of the matter. . . . I wish there could be 'advocate' research. I don't think that bastardizes research at all. It tempers it. It is too risky, too hazardous to just assume that it is appropriate let alone judicious, to take the pure researchers' approach. If the attitude behind the process is one that is devoid of passion and commitment, that is not a virtue" (DOL, 1980e:61-62).

One of the more impassioned versions of this argument was made by Robert Schrank of the Ford Foundation. "Large sums of money have been allocated for massive quantitative evaluation effort," he argued, "but no one is asking what the pitfalls of such research might be, or whether it is even appropriate to what we are trying to study." He continued, "The object of the research is a network of youth programs," not the production of research results. If research focuses attention on measurable results, at the expense of producing long-term effects on institutions, he argued, "the objective social science research model may turn out to be more of a burden than a beacon for policymakers." He went on to note "a terrible tension between doing objective evaluation and trying to make a program succeed" that worked against long-term solutions and in favor of short-term results. He also observed that one effect of doing evaluations of War on Poverty programs that were not effectively institutionalized was to reinforce the notions that "the social problems we were attempting to solve were intractable," rather than the right solutions hadn't been tried (DOL, 1980e:36-40).

In essence, then, when Taggart consulted his policy research constituency for advice about how to do knowledge development, he got back a faithful representation of the prevailing disagreements within that constituency over the methods, content, uses, and practical consequences of policy research, which were outlined at the beginning of this paper. There was pressure for timely results that would inform policy, but little understanding of what policy makers actually wanted to know and less appreciation for how long it would take to find out. There was pressure for methodological rigor, but no agreement on whether there were treatments that were compatible with the experimental model or whether experimentation was compatible with the commitment necessary to make programs work. There was advice to stick to the business of research and avoid the pitfalls of advocacy, but no advice about how to mount programs in a complex political and administrative setting without advocacy. There was counsel to respect the tension between dispassionate research and commitment to particular programs, but no concrete organizational solutions for how that tension could be resolved. There was advice about the dangers that accompany premature tests of program effects, but no clear understanding of when new programs should be evaluated.

No doubt, the participants in the Reston conference believed they had delivered a clear message to Taggart about the direction knowledge development should take. The overall effect, though, was to reproduce the general lack of agreement and to strengthen Taggart's resolve in pursuing the strategy he had chosen. For all its defects, Taggart's strategy at least had tentative solutions to the problems of large-scale policy research.

A far more serious set of policy system problems was posed by the Vice President's Task Force on Youth Employment. As noted above, sometime in the fall of 1978, the administration seized on youth employment as its major social policy issue for the 1980 campaign, having run into difficulty with welfare reform. The Task Force was as ambitious a policy development exercise as ever takes place in the federal government. It involved a significant central staff, led first by Tom Glynn, former director of planning and budget for ACTION, and later by Erik Butler, a director of youth programs from Boston and a researcher/practitioner at Brandeis.

The Task Force drew on the policy staff of the Domestic Council, including Bill Spring and Kitty Higgins, a DOL staff member on detail to the White House, and on outside consultants, including Peter Edelman, former director of youth services for New York State. It involved extensive interagency consultations between the Departments of Education and Labor. It served as the locus for wide consultations around the country with business, labor, education, and employment leaders and practitioners. And it resulted in the presentation of a major piece of legislation to the Congress in January 1980. The Task Force's budget, amounting to $1,027,485 over fiscal 1978 and 1979, was financed from YEDPA discretionary funds (DOL, 1980b).

Aside from the fact that the Task Force was funded from his budget, Taggart and OYP had larger interest in its work. If the President's proposal passed Congress, it would set the structure of youth programs for the foreseeable future. Taggart saw the longer-run stakes of the Task Force's work and focused a large amount of his energy, between early 1979 and January 1980, on drafting the DOL side of the proposal. In doing so, he attempted to draw whatever lessons were available from the first year's experience with YEDPA and from the conventional wisdom emerging from sustained attention to the problem of youth employment.

From Taggart's review he deduced a few relatively straightforward principles that were to shape both the administration's youth initiative and subsequent changes in federal employment and training policy. In part, these principles were as follows (DOL, 1980a:86-93):

- Standards. Everyone involved in the employment training enterprise should be held to mutually agreed, self-imposed standards, or benchmarks, of performance. Trainees who do not meet performance expectations should be moved out of programs to make room for those who are willing to try. Employers should be willing to provide structured and demanding activities in the workplace. Training organizations should be willing to set performance standards for themselves and their clients.
- Sequenced Activities. Programs should begin at the level of competence of entering trainees and should follow a sequence of structured steps designed to move trainees into unsubsidized employment.
- Targeted Resources. Funding formulas and administrative decisions should reflect the difference between high-cost, intensive services for high-risk youths and low-cost, less-intensive "transitional" services for more mainstream youths. The highest priority should be highly targeted, concentrated programs for the neediest.
- Consolidated Programs. The array of categorical youth programs initiated by YEDPA should be consolidated into a single program structure.
- Employment-Education Collaboration. The early efforts at better coordination between prime sponsors and local educational systems did not produce widespread changes, but the objective is an important one for federal policy.
- Institutional Comparative Advantage. Some organizations, notably community-based organizations, have a comparative advantage in reaching high-risk youths, although they vary widely in capacity to deliver services. Their role should be strengthened.
- Local Accountability. The federal program structure should encourage attention to measurable, quantitative outcomes, rather than to implementing complex regulations on program content.

Other, more specific, lessons emerged from reviews of the preliminary YEDPA evidence performed by Erik Butler and Jim Darr (Butler and Darr, 1979). These lessons focused on a review of program-by-program results, but generally followed the same themes.

In short, the Task Force and the administration's youth initiative forced a telescoping of the larger knowledge development process into a short period. Many of the longer-term institutional development and research objectives, while they continued to be important within OYP, were pushed aside in the policy-making arena in the interest of developing an administration proposal.

If the the Carter youth initiative had passed Congress, and if Carter had won reelection in 1980, the knowledge development process might have continued to pursue the longer-term institutional development, and the research objectives it contained might have received attention. But these things didn't happen. The Carter youth initiative passed the House in August 1980, but failed to reach the floor in the Senate. Carter lost his reelection bid. In the early months of the Reagan administration, federal employment and training policy underwent a major change, including the elimination of most YEDPA programs, with the passage of the Job Training Partnership Act.

The Demise of Knowledge Development

Long before the introduction of the Carter youth initiative, though, there was evidence that the knowledge development process was beginning to come apart in certain critical ways. First, the organizational network created at the beginning of the program began to require management from the center that OYP was hard-pressed to provide. In the words of a DOL observer, "It was one thing to get all those contracts negotiated, written, and signed in the first place, and quite another to deal with the problems that surfaced when the organizations started to have problems, not to mention turning the whole system over when the contracts needed to be renewed or terminated."

Second, the politics around the Vice President's Task Force began to take its toll on Taggart, politically and physically. By early 1980, it had become clear that youth employment was the only game in town for those interested in affecting domestic policy. With the election approaching, activity around the administration's proposal became feverish. There were predictable tensions between the Task Force and Taggart over details of the administration's proposal and the mechanics of assembling it. Taggart worked around the clock for months drafting a proposal and selling it within the administration. At one point before the administration's proposal had been sent to Congress, one participant remembered, "When Taggart's recommendations weren't incorporated fully into the administration bill, he circulated his own version around town and on the Hill. This, needless to say, did not endear him to the Task Force people." In the end, the employment provisions of the administration's proposal were largely determined by Taggart. But the costs of this political manuevering were reckoned in the loss of sustained attention to the management of the knowledge development process.

The unraveling of the knowledge development process began in March 1980, when Taggart resigned his position as OYP administrator. After leaving OYP, Taggart worked independently, with foundation funding, assembling research results on employment and training programs. He then established the Remediation and Training Institute, a private nonprofit organization, again with foundation funding to provide assistance to local employment and training operators. Taggart was replaced by Tim Barnicle, a regional DOL administrator from Boston, from March 1980 to January 1981. After that, OYP was run in the early months of 1981 by Richard Gililand, a former DOL regional administrator, who was transferred to the job by the then Assistant Secretary for Employment and Training, Albert Angrisani. After the passage of the JTPA, OYP was disbanded. Some of its staff were reassigned to various other parts of the agency, some left the department in a series of reductions in force, and "knowledge development" ceased to exist.

Though the activity called knowledge development ceased to exist, many of the contracts negotiated as part of the knowledge development strategy were still outstanding. Some contracts extended into 1982. In an effort to bring some order and closure to these contracts, the Brandeis Center, in late 1981, compiled a list of unfinished projects, along with recommendations for their disposition. They identified about 120 incomplete discretionary projects, of which all but a few required additional DOL action to close them out. They also examined data collection activities under ETS's Standard Assessment System, and found 20 of 48 sites in which data were incomplete.

The posture of Reagan appointees in the Department of Labor toward these unfinished projects, by most accounts, ranged from indifference to outright hostility. "When the new administration arrived," one insider recalled, "an immediate freeze was put on all time extensions and refundings of the ongoing research efforts. They wouldn't even let the entitlement research be completed until an editorial appeared in the Washington Post that created a Congressional uproar. It is in the nature of research that repeated time extensions and some cost overruns occur. By systematically refusing extensions and [by] disbanding the youth office, most research was halted in its tracks. Without a program officer to follow up for final reports and without time extensions, even where new funds were not required, and without any hope of new research money coming from the department lots of these committed academics just went off in search of other grants. Others didn't have the funds to analyze the data they had collected. . . .

"No one ever bothered to follow up. In fact, the atmosphere was very hostile to research and other discretionary projects. We were instructed to call grantees and tell them they couldn't publish papers unless the department cleared them. Such an instruction contradicted the actual language encouraging publication in the grants themselves."

A career DOL employee with extensive experience in evaluation observed that after the change in administrations the contracts were "technically" administered, "but no longer with knowledgeable staff or any sense of high-level attention." Andrew Hahn, from Brandeis, is more pointed: "Our posture was that the taxpayers had already paid for the research and they should have the benefit of the results. We tried to lay out what was necessary to close it [knowledge development] off with the best results possible. It became clear, though, that finishing was not a high priority." The Reagan administration's interest in dissociating itself from the program of an earlier administration was understandable. Its means of dissociating itself so was less understandable to people with a strong interest in research and evaluation.

The demise of knowledge development, then, was a compound of management and politics. The management problems stemmed directly from strategic decisions about the purposes of knowledge development and the organizational form necessary to carry out those purposes. Knowledge development began to come apart organizationally when the problems of conglomerate organization became clear and no solutions were forthcoming from Taggart and his staff. The complex system of intermediaries, external staff, intraagency and interagency agreements was predicated on the accurate assumption that OYP, by itself, could not manage an enterprise of the scale required.

The system was a way of dispersing responsibilities among a variety of organizations, while at the same time maintaining a central agenda. Taggart could, in the early stages, by sheer force of personality and intellectual energy, give this system some coherence through his use of research as a management tool. The chief vulnerability of this kind of system, though, is that when the constituent parts begin to have problems, the center is ill equipped to solve them. And when the center becomes overloaded, as it did, with the problems of the constituent parts and with external pressures of the policy agenda, the system begins to shake itself apart into individual projects. The center depends on the constituent pieces to make the system work. But OYP was not able to generate enough capacity in its constituent pieces fast enough, or uniformly enough, to relieve pressure on the center.

The political causes of the demise of knowledge development lie, ironically, in the close connection between research and policy. Congress, or at least the House, expected useful answers to the question "What works for whom?" in time for the CETA reauthorization in 1978. The Carter administration, when it finally turned its attention to youth employment, expected support for a new domestic initiative. Taggart's research, program, and policy constituencies expected methodological rigor, sensitivity to administrative constraints, and firm answers to policy questions.

How the contradictions among these demands were to be reconciled was a problem his constituents happily left to Taggart. From the beginning, knowledge development was expected to inform policy--early and often. It was not to be a long-distance run with a single finish on some remote horizon; it was to be a series of sprints with the finish lines dictated by political landmarks. Taggart did little to discourage, and much to encourage, this view; it reflected his own belief in the active relationship among policy, program management, and research. The consequences of this close connection between policy and research, however, were twofold. First, as the 1980 election approached, the demands of managing the conglomerate were overwhelmed by the demands of policy making. It wasn't enough for Taggart to focus on making an unwieldy organization work; he had also to focus on influencing administration policy. Second, when the political agenda shifted, with the election of Ronald Reagan, the ground was cut from under the program.

INFLUENCE ON POLICY AND PRACTICE

Despite the unfinished work, and the ignominious end, the knowledge development process generated a large volume of research on the subject of youth employment. One tangible proof of this output is the published collection of knowledge development reports, begun before Taggart left and continued through 1980, which contain the planning documents, evaluations, and basic research reports completed before 1981. The complete collection comprises more than 70 reports, from 100 to 400 pages, color coded by topic, in the form they were received as final products from research contractors, with short introductions explaining how their content relates to the overall set of questions around which the knowledge development process was designed. The idea behind this method of dissemination was to make as much of the knowledge development research quickly available to policy makers, policy analysts, researchers, and practitioners as possible and to synthesize it later. CEIS, at Brandeis, was to play the role of pulling the pieces together around common themes. Because of the abrupt way the process was terminated, the product of the federal investment became those undigested reports, and the Brandeis synthesis continued later under private funding.

OYP began mailing the reports to potential consumers in mid-1980. In some quarters, notably Capitol Hill, this approach had the opposite of its intended effect. Some people, it appears, preferred their research in smaller bites. Nat Semple, former House minority staff member, said facetiously, "We came to one morning and they backed a dumptruck up to the building and unloaded a ton of reports. The stuff just wasn't useful."

The same people who ridicule the way the knowledge development reports were disseminated, however, are generally complimentary of the background materials and "lessons from experience" papers that accompanied the Carter administration's youth initiative. These summaries of the first two years of knowledge development were, in the view of Hill staff, written in language understandable to legislators, addressed to issues considered important on the Hill, and generally responsive to questions that arose in consideration of the youth initiative.

Reinforcing this perception from the Hill is the perception of those who worked on the Carter youth initiative. Domestic Policy Staff member Bill Spring argues, "I think there is broad agreement among those of us who worked in the White House that the Youth Initiative was probably the best-run policy-making exercise in the Carter years. It got the right information to the right people, it forced the education folks to talk to the employment and training folks, it forged a broad consensus on how to get at an important problem. You have to say that none of that would have been done in the same way without the knowledge development process to back it up."

Most of the supporting documents for the youth initiative would not be considered "research," in the strictest sense of that term, although they were often couched in the language of "what works." They more often took the form of recommended standards, criteria, funding mechanisms, and institutional arrangements emerging from practical experience. Around these operational issues, a consensus began to emerge in about 1980 that spans partisan loyalties and institutional affiliations. This consensus has had a significant influence on federal policy. It forms the basis for much of the statutory language and administrative structure surrounding the Joint Training Partnership Act (JTPA). Robert Gutman, the Senate majority staff member who took the leading role in drafting JTPA, was also involved in the drafting of YEDPA and in discussions of the Carter youth initiative, in which the same issues surfaced. A wide range of people, from Taggart to the Brandeis staff to the Vice President's Task Force staff to congressional staff, claim credit for influencing the content of JTPA. This consensus is an important indication that YEDPA and its attendant policy activities created an occasion for rethinking the legislative and administrative structure surrounding federal youth employment programs.

This consensus has been described in a number of ways in a variety of documents (Taggart, 1981; Hahn and Lerman, 1983; National Council on Employment Policy, 1983, n.d.), but it includes at least the following basic elements:

- Focus on High-Risk Youths. Limited federal resources, the indeterminacy of aggregate unemployment statistics for youths, and the seriousness of the problems faced by economically disadvantaged high school dropouts all argue for a strategy more highly focused on what Taggart calls "the leftovers"--young people excluded from conventional routes to education and employment.
- Deemphasize Income Maintenance, Emphasize Employment. Employment programs should have employment objectives, income maintenance programs, and income maintenance objectives. Training stipends and wage subsidies should be set to encourage unsubsidized employment and reward performance, rather than to provide income.
- Deemphasize Work Experience, Emphasize Basic Skills and Job Training. Work experience should no longer be used as the catch-all solution for the unemployed. It seldom leads to longer-term employment unless it is linked in some systematic way to education and training.
- Use Individualized and Sequenced Programs. Many of the failures of employment and training programs stem from mismatches between the competencies of the trainees and the content of the programs. Programs should be designed to provide basic education, training, and job entry in a sequence and combination that matches the individual's requirements, with intermediate benchmarks to gauge performance along the way.
- Require Performance Standards for both Individuals and Programs. Employment is the expected outcome of employment programs, therefore people in the employment and training system should be evaluated and rewarded on the basis of their performance in securing long-term, unsubsidized employment. Intermediate benchmarks are important, but employment outcomes are essential.
- Reward Performers. The absence of positive rewards for both individuals and program operators leads to a focus on the lowest common denominator of participants. Programs should select from the most disadavantaged and reward those who succeed in meeting expectations.
- Use Mainstream Institutions. The isolation of education and training for the disadvantaged from mainstream institutions, especially employers, compounds problems of access. Heavier reliance on apprenticeships and employer-based training decreases barriers to entry.

- Invest in Capacity. The employment and training system has been among the most unstable of domestic service systems. It needs a stable base of federal support and a professional constituency to do its job.
- Incremental Expansion. The employment and training system has been buffeted by a series of dramatic shifts in policy since it was established. New policies should be allowed to mature and develop before they are dramatically altered.

None of these principles seems particularly revolutionary, nor particularly "scientific" or counter-intuitive for that matter. But measured by the distance between the conventional wisdom of 1976 and that of 1985, rather than the tenets of social science method, they constitute a profound shift. This shift is attributable largely to the fact that YEDPA focused the attention of researchers, practitioners, and policy makers for a time on connecting practice with policy.

Another indication of the influence of knowledge development is the general perception among policy staff and their bosses that the YIEPP demonstration, the largest and most visible of the knowledge development activities, was successful. Most staff cite the findings of the MDRC reports on entitlement as evidence that well-designed and well-managed programs can have an impact on high-risk youths, that despite start-up difficulties in some settings it is possible to mount a program based on the entitlement principle, that requiring youths to manifest certain commitments and competencies as a condition of support is workable, and that educational institutions must modify their programs to make the entitlement principle work.

The fact that the entitlement demonstration did not lead to a full-scale national program, is not troubling to most insiders. Nat Semple, the staff person who had probably a larger stake in the entitlement demonstration than most, says, "The political realities of 1981 were that you weren't going to get anything through Congress with the word "entitlement" in it. Also, there was one serious design flaw in the entitlement program that required attention: the fact that when the subsidy ran out, a lot of employers just gave kids pink slips. The demonstration, though, had effects well beyond the evaluation. It legitimized the idea that standards were fair and effective."

Another view of the influence of knowledge development comes from the Brandeis staff, who remain the single repository of knowledge development products, the main synthesizers of that evidence, and one of the few organizations created by that process that still exist. Andrew Hahn describes the influence this way. "Before YEDPA and knowledge development people who worked in the youth employment field basically had no common professional identity. One effect of knowledge development was to put a large infusion of resources behind the creation of a professional constituency for youth programs. That is the first step in raising the standards in the field to the point where, as in education, you can start to expect people to perform effectively." Brandeis's current, privately funded work is training and technical assistance for youth practitioners; the network they use to deliver these services is constructed from people and organizations involved in YEDPA and the knowledge development effort.

Taggart takes yet another view of the influence of knowledge development. By 1979-1980, he had evolved a longer-run strategy for using research and technical assistance to raise the quality of youth employment programs, consistent with his pessimism about the ability of practitioners to discover more effective techniques by themselves. The idea was that the evaluations of discretionary knowledge development projects and the activities of intermediaries would produce a list of discrete program options. Taggart uses the term "cookie cutter programs" to describe these options. Different settings would require different combinations of options, given their youth populations, mix of organizations, and employment problems. The intermediaries would function as technical assistance agents, under contract with localities, to deliver pieces of a program.

With the demise of the network of organizations created by the knowledge development process, this mechanism failed to materialize. But Taggart's own activities now focus on the use of computer technology to construct education and training programs for high-risk youths from the available body of packaged curricula. Among his clients are local councils created under JTPA.

Against this relatively sanguine view of the influence of knowledge development is arrayed a more pessimistic view, which takes its point of departure from assessments of the methodological quality of knowledge development activities and their payoff in terms of scientifically verifiable results. Michael Borus, a researcher from Rutgers, has reviewed research on employment programs for high-risk youths, including the Neighborhood Youth Corps, the Job Corps, and a number of discretionary knowledge development projects under YEDPA. He found serious methodological flaws in most impact evaluations of these programs--including low response rates, lack of adequate comparison groups, and rudimentary development of treatments--and little evidence, outside of Job Corps, of positive effects.

He concludes that no progress has been made in creating effective programs, and that, because of a lack of methodological and substantive sophistication, policy makers and program administrators continue to make the same mistakes with each new initiative. His recommended solutions include evaluating only fully implemented programs and using "true experimental designs," carefully designed and implemented data collection instruments, benefit-cost analyses of program effects, and planned variations in program design (Borus, 1984).

Between the sanguine view of policy- and program-oriented researchers, on the one hand, and the unrelenting skepticism of the academic research community, on the other, lies a vast gulf of misunderstanding, disagreement, and conflict over what constitutes "useful" knowledge. For policy staff and program-oriented researchers, knowledge is useful when it helps to solve immediate problems that legislators, administrators, and practitioners think need solving. Knowledge comes in many forms--logic, insight, operating skill, political intelligence, and empathy, to name a few--only one of which is social science research. Creating new knowledge depends on a prior investment in programs and institutions to deliver them. Research methods are only useful insofar as they are instrumental in solving problems; when they get in the way of institution building and problem solving, they should be modified. For the social scientists, knowledge is useful only when it can be verified and replicated with known levels of certainty. Methodological rigor is a prior condition for any useful knowledge. Problem solving, whether in policy or in practice, is meaningless unless it involves the systematic accumulation of replicable research over time.

As noted at the outset of this paper, these disagreements have been rehearsed with monotonous regularity in virtually every large-scale policy research effort since the 1960s, with only a modest recognition of the common ground between the two views. The arguments are complicated by ominous attributions, on both sides, of political agendas and personal ambitions. Policy and program enthusiasts are accused by social science researchers of "advocacy" (as if it were possible to be an effective practitioner without being an advocate) and of using public funds to further private agendas (as if social scientists did not benefit from doing research on program ineffectiveness). Social scientists are accused by policy and program advocates of being chronically in opposition to whatever the prevailing conventional wisdom is and of putting their own peculiar tools of the trade ahead of the interests of regular folks (as if advocates never did the same thing).

These debates are inevitable, in some cases useful, and almost always amusing. But they often do not shed much light on the larger questions of how to make judgments about the investment of the public's money in large-scale research and development enterprises, such as the youth employment knowledge development effort. These larger questions often broach the diffuse and difficult subjects of political, organizational, and management strategy--subjects in which neither social scientists nor policy advocates believe they have a comparative advantage. Yet, as this analysis makes clear, large-scale research and development enterprises succeed or fail based not on people's fervor, commitment, nor methodological orthodoxy, but on how skillfully they make strategic decisions.

GUIDANCE FOR THE FUTURE

At the outset, I posed four broad questions raised by the youth employment knowledge development effort: What constitutes "useful" knowledge? What should be the relationship between the delivery of services and the discovery of effects? What are the political and organizational correlates of successful accumulation of knowledge? And what payoffs should we expect from large-scale research, demonstration, and evaluation efforts? In the tentative answers to these questions lie whatever guidance the knowledge development effort has to offer future policy makers, administrators, and researchers.

Useful Knowledge

Running through the knowledge development process is a tension between knowledge acquired through social science and knowledge based on practical insight--a tension between science and ordinary knowledge. When House members asked the Department of Labor to "find out what works," they stated their concerns as a potpourri of questions and problems. Some of those questions, such as how to solve structural unemployment among young people, implied sophisticated, long-term research. Others--the effects of specific training and job-search activities, for example--implied shorter-term project evaluations. The congressional mandate did not take account of the vast differences in those questions, nor the time and resources required to answer them. The questions specified by the House were, from a research perspective, exceedingly vague. They provided little guidance for what the Congress meant by "finding out what works." Assuming that Congress meant rigorous research when it said "find out what works" probably overstates the sophistication of Congress's concern. Congress was more interested in generating a variety of practical activities addressed to youth employment than in setting the conditions for rigorous social research. On this score the House and Senate agreed. The objective was to launch a wide variety of activities and see if they could survive administratively and politically. In the words of a House staff member, "finding out what works" meant "let a thousand flowers bloom," not the conduct of rigorous research.

When members of Congress said "find out what works," they had in mind nothing more complicated than demonstrating whether new programs could be instituted administratively and whether young people could find useful work in the process of participating in them. Larger, more sophisticated research questions were embedded in this basic concern, but were not central to Congress's thinking. With certain routine qualifications, the answer to the questions posed by Congress, after three years of research and demonstration, was "yes." Knowledge of this kind is far from trivial, even though it does not meet many social scientists' theoretical or methodological standards.

Congress had other important items on its agenda beyond finding out what works. Distributive politics--by age, by region, by constituency group, by federal agency, and by level of government--was Congress's major concern. The legislative language and history of YEDPA manifested far more attention to the distribution of money among competing interests than it did to discovering solutions to youth unemployment. Making the CETA system more responsive to the problems of youths was another agenda item. By targeting youths for special concern, Congress was, in effect, telling the Department of Labor and the CETA system that they had not paid adequate attention to the problems of youths. Still another agenda item was using federal funds to make the schools and the employment and training system work more closely together. From the point of view of certain members, the gap between schools and CETA-funded organizations was inexcusable and should be closed.

Each of these items brought with it a collection of problems that Taggart and his staff had to solve in the implementation of YEDPA.

Failing to address these items would have meant failing to respond to the manifest concerns of Congress.

One can argue that Congress was irresponsibly vague, that it failed to provide the necessary guidance in structuring a research agenda, and that it undermined the possibility of finding out what works by loading too many other items on the agenda. But these arguments all miss an essential point: Congressional action requires coalitions; coalition politics requires vagueness and multiple agenda items. In some instances, as YIEPP illustrates, the demands of coalition politics and the demands of rigorous research are not incompatible. One cannot *expect them to be compatible in all*, or even most, instances. Ordinary knowledge of politics, in other words, should shape our sense of what we can feasibly expect of Congress in setting the initial conditions of large-scale research on social problems.

Ordinary knowledge of administration also played an important role in the knowledge development process. Federal employment and training programs are administered through units of state and local government, which are in some senses autonomous, but which also assume the delegated authority of the federal government to make contracts for the delivery of services.

When a shift in policy creates new demands on that system, these units are entitled to ask a host of practical questions about the consequences of those demands. How should new programs be meshed with existing delivery structures? How should the competing demands of services for youths and adults be sorted out administratively, organizationally, and politically at the local level? If local employment training programs are supposed to be coordinated with local educational systems, what is acceptable evidence of coordination and how have other jurisdictions responded to the requirement? If young people are to be given clear expectations of performance as a condition for participation in employment programs, what constitutes satisfactory performance and what happens to those young people who do not meet expectations?

Again, these questions are relatively far removed from the conventional social science questions about Treatment A and Treatment B, but they describe knowledge that plays an important role in addressing Congress's concerns about whether new programs can be made to work administratively. Moreover, since the administrative structure is composed not just of functionaries working under contract to the federal government, but also of governors, mayors, legislators, council members, and the like, who are elected officials in their own right, these people are entitled to answers.

If we probe far enough into the administrative structure, we eventually reach the people who call employers to ask if they would be willing to hire a young person, who teach reading, multiplication, and long division to 18-year-old dropouts, who try to find housing for a young man who is sleeping in his car, and who try to find child care for a young woman who is about to leave the welfare roles and start working as an orderly in a nursing home.

These people ask a different order of question. If we add another section to our remedial General Equivalency Diploma course, who will we get to teach it? If we are expected to get rid of kids whose attendance and academic performance are poor, how do we keep our enrollment at a high enough level to meet our placement objectives? Is there a way to combine the teaching of elementary math with training in the use of common measurement tools? Is it okay to send a bright, but poor and neglected, kid to the academic program at the local community college rather than to a job placement--will it count against our placement results? These questions are also somewhat removed from the Treatment A versus Treatment B questions of social scientists. But if someone cannot answer these questions, it is highly unlikely that the designs set in motion by Congress will be translated into employment for disadvantaged young people, or that the application of research methods to employment programs will yield information useful to policy makers.

What constitutes "useful knowledge," then, depends on where you stand in the complex system of relationships that operates on the youth employment problem. From this premise, three conclusions follow: First, only a small part of what the system as a whole regards as useful knowledge meets the social scientist's definition of useful knowledge. Second, ordinary knowledge, in the form of answers to practical questions about whether things can be done, is a precondition for more sophisticated forms of knowledge, like that resulting from social experiments. And third, if political and administrative systems fail to accumulate ordinary knowledge, they will, with absolute certainty, fail to accumulate scientific knowledge.

The notion that social problem-solving requires the faithful application of social science methods to policy decisions, then, is not so much wrong as it is incomplete. Social science deals in a kind of knowledge that is derivative of, and dependent on, other kinds of knowledge. Failing to distinguish between ordinary knowledge and scientific knowledge, and failing to understand the role that ordinary knowledge plays in the creation of scientific knowledge, is the single largest problem with social science in the service of policy making. As an exercise in the creation and codification of ordinary knowledge, the knowledge development process was a qualified success--at least in the eyes of people who regard ordinary knowledge as important. As an exercise in the application of social science methods to the problem of youth employment, it was less successful, but by no means a complete failure.

Whatever its other defects, the knowledge development process did reflect, in its design and execution, the distinction between ordinary knowledge and scientific knowledge. Taggart observed that the application of social science methods to early YEDPA projects was "researching ineffectuality, not intervention." He observed later that, for all its defects, the knowledge development effort produced more social science on employment questions than any previous federal intervention. His understanding of the limits of the existing delivery system led him to take a skeptical view of the possibilities for experimentation and to focus on creating the prior conditions for scientific knowledge. On the one hand, this focus resulted in what seemed, from the point of view of social science, a disproportionate investment in activities that did not produce "results" in the form of clear treatment-control comparisons. On the other hand, the focus seems far more troubling to social scientists than it does to other actors in the process, including the Congress, which authorized the program to start with.

At a minimum, then, it seems that future large-scale employment research and demonstration projects should begin with a frank acknowledgment that experimentation is the final stage of some larger effort to codify ordinary knowledge, not the first step in finding out what works. Doing research and demonstration projects involves a large-scale investment over a long period of time in creating a conventional wisdom, translating it into structures and beliefs and behavior, and then (after a fashion) subjecting it to some sort of rigorous empirical test.

Beyond this minimum condition, it seems reasonable to promote actively the notion that different levels of knowledge are required to mount large-scale research and demonstration projects, and that doing research is only one way of gathering the necessary knowledge. Simple expedients are often the most effective, like practitioners' workshops, regularly scheduled congressional visits to pilot projects, and head-to-head discussions among administrators, practitioners, and researchers. All of these, and more, occurred in the knowledge development process. Whether they are understood as legitimate parts of knowledge development in retrospect is problematical. When the results of the knowledge development process are culled for "hard" conclusions about what works, these parts of the process are often lost.

Delivering Services and Discovering Effects

Another important tension running through the knowledge development process is that between delivering services to constituents and tracing the long-term benefits of those services for disadvantaged youths and for society at large. Most descriptions of YEDPA begin with the statement that its purpose was to find out what works in getting high-risk, disadvantaged youths into the labor market. As we have seen, this is not so much an inaccurate reading of the intent of Congress as it is an incomplete one. Certain members of the House had a genuine interest in finding out what works, but that interest was also rooted in a politically motivated desire to restrain the Senate's enthusiasm for spinning out new programs. Most key Senators thought they knew what to do and saw YEDPA as the vehicle for doing it. The compromise between the House and Senate incorporated both the House's tentativity and the Senate's commitment to specific solutions. More importantly, though, Congress's charge to DOL made clear that the new resources were to be deployed to support the network of constituencies that had grown up around employment training programs. If DOL failed in that mission, the issue of "what works?" would be moot, since there would be no political constituency to support youth programs in the next round of congressional debate. While finding out what works was an important purpose of YEDPA, delivering services to political constituencies, state and local jurisdictions, employment training organizations, and disadvantaged youths was instrumental to that purpose. Research and development without a political constituency is of little practical use to elected policy makers.

Most of the money spent on knowledge development was not spent on research. It was spent on providing jobs, training, and education to disadvantaged youths. Most of the decisions about which organizations would receive YEDPA discretionary funds were not based on the proven research capacity of those organizations, or even the expected payoff of the funds in research results. In fact, most organizational recipients were chosen on the basis of the constituencies they represented. Within the vast collection of projects that knowledge development comprised were a limited number of projects chosen explicitly for their research value--some on the basis of congressional intent, some on the basis of OYP's policy research agenda. It was in this limited array of projects that the research payoff of knowledge development was to occur.

One can argue about whether the research agenda was well formulated, whether the right projects were chosen and developed in the right ways, whether the proportion of constituency-based projects was too large, or whether the right organizations were represented in the constituency-based projects. But it is difficult to argue with the fact that most of what goes on in research and development activities of the scale represented by YEDPA consists of delivering services to constituents, not doing research. It is also difficult to argue with the fact that creating political constituencies is an important part of the process of getting from research to a change in policy.

This intimate connection between delivering constituent services and discovering effects did not elude Congress, nor did it elude Taggart when he deployed YEDPA discretionary money. It did, however, seem to elude many of the social scientists and policy analysts who criticized the knowledge development effort. The confusion between "advocacy" and "research" troubled some, as did the raggle-taggle quality of the research in many of the demonstration projects. Anxious to show that social science could deliver clear, policy-relevant guidance, they failed to see that the delivery of services was driving research, not vice versa.

There is vicious paradox in the use of social science rhetoric to justify social intervention. YEDPA is described as an attempt to find out what works, when in fact it was an attempt to deliver services to constituents while at the same time finding out what works. Because many people, even the politically sophisticated who presumably know better, accept that the primary purpose was to find out what works, the "mere" delivery of services becomes tainted. It is not enough to get the money out to the right people and to get the right organizations involved in searching for solutions to the problems of disadvantaged youths. If the delivery of services does not add significant new knowledge to social science, or provide solutions to the problem of structural unemployment, it is a failure. Anything short of significant new social science knowledge is just pork barrel. There is nothing wrong with aspiring to significant new social science knowledge, or to long-term solutions to structural unemployment. The problem occurs when, aspiring to these things, we conclude that merely providing jobs, training, and education to disadvantaged youths, and merely building a professional constituency with an interest in providing those services, means that policies have failed. When this happens, the gulf between science and politics widens irreparably.

The fact that we find it easy to discredit interventions that merely deliver services, but difficult to find scientifically valid solutions to chronic social problems, may mean that we have gotten too sophisticated in using the rhetoric of social science to justify social intervention. Until the "solutions" come along, we may simply need to do a better job of delivering services. Rather than arguing that large-scale social interventions will result in solutions to chronic problems, we may want to say that, while we are working on the chronic problems, we intend to see that some number of disadvantaged young people get access to jobs, training, and education. If we fail at the more ambitious task of finding scientifically valid solutions, we have at least succeeded in delivering services and at creating a constituency committed to search for the solutions.

In practical terms, researchers and policy makers alike should moderate their use of social science rhetoric to justify social intervention. Finding out what works, in the scientific sense, requires a long-term investment in practical knowledge as well as research. If that investment is not possible, then we should not expect to find solutions to chronic social problems. In the meantime, merely delivering services may be the best we can do.

Political and Organizational Correlates

Laurence Lynn (1981b), in his book Managing the Public's Business, argues that the alleged failures of public management are as much a result of poorly framed policies as they are of incompetent administrators. The initial conditions set for public servants often make their success unlikely. There is probably no better illustration of this argument than YEDPA. DOL was given four new youth programs to implement. It was directed to expand two existing programs dramatically, and it was given a large amount of discretionary money to find out what works for disadvantaged youths--all with a 1-year authorization. The programs were reauthorized in 1978, but by that time the Carter administration had launched the Vice President's Task Force on Youth Employment, with instructions to produce a new youth employment policy by the following year. The pressure mounted within the administration to produce results that simply were not there. By 1980, as the YEDPA research and demonstration agenda was beginning to produce results, the presidential election brought a reversal of the mandate under which YEDPA was launched. Each of these events can be explained by the logic of electoral politics. Electoral politics is what makes policy research possible. But, against this background, it should surprise no one that the results of YEDPA knowledge development fell short of expectations.

In a practical sense, there was little anyone in DOL could do to control the volume or the pace of the political demands they were operating under. No Sectretary of Labor in his right mind would tell the leading members of the U.S. Senate on both sides of the aisle that they should scale back their ambitions. DOL faced the choice of participating in the authorization of YEDPA and sharing in the credit, or not participating and getting the program anyway. Nor would a sensible secretary discourage the President from making his department's program a central domestic initiative in the next campaign. There were, strictly speaking, no solutions to the problem of external demands on YEDPA, only adaptations. These adaptations carried a high cost, both to the delivery system and the production of useful knowledge.

The political lesson from YEDPA is relatively clear, although probably not very helpful. The scale of the enterprise was incompatible with the pace of external demands. A research and demonstration effort, without the complex structure of operating programs, could have produced modest, short-term results within the amount of time available. A number of new operating programs could have been launched, with limited payoff in terms of new research and development. But both demands together were incompatible with the time and institutional capacity available. It is instructive that the entitlement demonstration, the one piece of the knowledge development effort that had a relatively clear mandate, a finite research agenda, and a considerable amount of institutional research capacity behind it, came the closest to meeting congressional and executive expectations. It is also instructive that the Job Corps, the federal youth program with the greatest institutional maturity, the longest history of trial and error (in both the political and experimental sense), and the most sustained evaluation, is the example that most policy makers reach for when they try to define successful employment policy. The more diffuse the mandate, the more complex the research agenda, and the less well-defined and mature the institutional capacity of the delivery system, the more difficult it is to deliver services and do research on them. The fact that the knowledge development effort produced as much as it did is testimony to the ability of many people to operate under heavy expectations and unreasonable time constraints.

On the organizational side, two main facts stand out: the lack of capacity within DOL to manage an effort of the scale required by the YEDPA mandate, and the lack of explicit consideration of organizational alternatives to the one finally chosen. The lack of capacity is as much a commentary on the nature of federally managed programs as it is on the qualifications of DOL/OYP staff. There were limits to how much research expertise one could expect people with essentially programmatic backgrounds to bring to their jobs. But even with the best-qualified federal staff, running a large-scale federal research and development program is an exercise in indirect management. The programs are administered by people whose main interest is in delivering services, the research and evaluation are done by people whose main interest is in devising and executing designs. The job of the federal administrator, in this set of relationships, is to mediate conflicting interests and to use financial and regulatory incentives to get other people to do their jobs. As Taggart can testify, this is devilishly difficult work for which few people are equipped by experience or training. The more complex the system of administrative relationships, the more skill required to manage it, and the less uniform one can expect the results to be.

In other words, "lack of capacity" can mean both lack of qualified staff and lack of direct control. Taggart's administrative strategy for dealing with limited capacity was to create capacity in other organizations and manage them from the center. It was well suited to OYP's capacity, in both senses of the term. But it had the weakness of all such strategies--it was vulnerable to variability at the periphery. Some external alliances worked well, because they were well organized and well staffed; others did not. If there are too many cases of the latter, the system becomes difficult to manage from the center. The solutions to this problem lie either in working on a much smaller scale--an alternative not really available under YEDPA--or in generating more capacity on the periphery--something that takes time to do.

The lack of an explicit consideration of organizational alternatives to the one that evolved is not unusual in federal agencies. No one in the executive branch specializes in thinking about alternative ways to organize complicated undertakings. DOL and other executive actors with an interest in YEDPA were preoccupied with larger issues at the beginning of the effort. Taggart was not the sort either to pose alternatives or to stand back and wait while others did. He did what he considered necessary: he consolidated program operations, research, and evaluation in OYP. From Taggart's point of view this was the best solution. It is not clear, however, that it was the best solution from the point of view of DOL, Congress, or the executive branch. Neither is it clear, however, that any of the alternatives for dispersing YEDPA authority among other DOL units would have worked any better. The lesson is not that there was a better way to organize knowledge development. The lesson is, rather, that the decision of how to organize such an effort is probably the most important high-level executive decision that cabinet-rank officials face. It merits careful analysis. It did not get that analysis in this instance.

Payoffs

A few conclusions about the expected payoffs of large-scale research and development efforts like YEDPA follow from this analysis. The first is that, especially when solutions to chronic social problems involve changes in existing institutions or the creation of new ones, ordinary knowledge is a prior condition to the creation of scientific knowledge. Administrators and practitioners need to know what to do, or what to do differently, in the most practical sense, before they can begin to act in systematically different ways. Legislators need to know whether programs can be administered and whether benefits can be delivered, before they can make judgments about whether broader social problems can be solved. Social science methods, by themselves, do not deliver this knowledge. Investing in useful knowledge, then, entails investing as much in simple information, practical intelligence, and networks of communication as in research and evaluation. Second, there is a serious danger in justifying new policies on the basis that they will increase our knowledge of how to solve chronic problems, rather than merely delivering services to constituencies and individuals. If the problems turn out to be resistant to social science inquiry, as they usually do, the failure of research discredits the delivery of services. Third, there is little anyone can do to limit the effect of shifts in the political environment on large-scale research and demonstration efforts, but if the complexity of the enterprise is inconsistent with the time constraints imposed by shifting political priorities, the blame for failures should be shared equally by elected officials and administrators. Fourth, one element of large-scale research and development efforts that is subject to executive control is their organization. Initial decisions about how to organize large-scale efforts should be subjected to explicit analysis and high-level executive scrutiny: What capacity is required? What organizations have the required capacity? What capacity needs to be developed? What incentives are available for mobilizing that capacity?

ACKNOWLEDGMENTS

I would like to acknowledge the assistance of Charles Betsey, study director for the Committee on Youth Employment Programs, and Robinson Hollister, chair of the committee, in preparing this paper. Members of the committee provided useful comments and criticism at an early stage of the research. Special thanks also to Bernard Anderson, Gordon Berlin, Michael Borus, Seymour Brandwein, Erik Butler, David Cohen, Fred Fischer, Tom Glynn, Andrew Hahn, George Iden, Arnold Packer, Dan Saks, Nat Semple, and Bill Spring for comments on earlier drafts, though they bear no responsibility for the final product.

This paper is based in part on a series of interviews with participants in YEDPA program development and policy-making processes. Their willingness to discuss events and share insights contributed greatly to the paper.

REFERENCES

Borus, M.
1984 Why Do We Keep Inventing Square Wheels? What We Know and Don't Know About Remedial Employment and Training Programs for High School Dropouts. Unpublished paper. Manpower Demonstration Research Corporation, New York City.

Butler, E., and J. Darr
1979 Lessons from Experience: An Interim Review of the Youth Employment and Demonstration Projects Act of 1977. Center for Public Service. Waltham, Mass.: Brandeis University.

Hahn, A.
1979 Taking stock of YEDPA: the federal youth employment initiatives, Part I. Youth and Society 2(2):237-261.

Hahn, A., and R. Lerman
1983 The CETA Youth Employment Record. Washington, D.C.: U.S. Department of Labor.

Hargrove, E., and G. Dean
1980 The bureaucratic politics of evaluation: a case study of the Department of Labor. Public Administration Review 40(March/April):150-159.

Lindblom, C., and D. Cohen
1979 Usable Knowledge: Social Science and Social Problem Solving. New Haven, Conn.: Yale University Press.

Lowry, J.H., and Associates
1979 1980 Determining the Viability of Intermediary Non-Profit Corporations for Youth Programming. 4 Vols. Chicago, Ill.: James H. Lowry and Associates.

Lynn, L.
1981a The President as Policymaker: Jimmy Carter and Welfare Reform. Philadelphia, Pa.: Temple University Press.
1981b Managing the Public's Business. New York: Basic Books.

National Council on Employment Policy
1983 Back to Basics Under JTPA. Washington, D.C.: National Council on Employment Policy.
n.d. Investing in America's Future. Alexandria, Va.: Remediation and Training Institute.

Peters, T., and R. Waterman
1982 In Search of Excellence. New York: Harper and Row.

Rein, M., and S. White
1977 Policy research: belief and doubt. Policy Analysis 3:239-271.

Rivlin, A.
1971 Systematic Thinking for Social Action. Washington, D.C.: The Brookings Institution.

Salamon, L.
1981 Rethinking public management: third-party government and the changing forms of government action. Public Policy 24(3):255-276.

Taggart, R.
1980 Youth Knowledge Development: The Process and Product. Unpublished paper.
1981 A Fisherman's Guide: An Assessment of Training and Remediation Strategies. Kalamazoo, Mich.: Upjohn Institute for Employment Research.

U.S. Congress
1977 Conference Report 95-456. June 22, 1977.

U.S. Congress, House of Representatives, Committee on Education and Labor
1977 Youth Employment Innovative Demonstration Projects Act of 1977. Report 95-314. June 22, 1977.

U.S. Congress, Senate, Committee on Human Resources
1977 Youth Employment Act. Report 95-173. May 16, 1977.

U.S. Department of Labor
1978 Employment and Training Report of the President. Washington, D.C.: U.S. Department of Labor.
1979 Employment and Training Report of the President. Washington, D.C.: U.S. Department of Labor.

1980a Employment and Training Report of the President. Washington, D.C.: U.S. Department of Labor.

1980b Knowledge Development Activities, Fiscal Years 1978-1979. Office of Youth Programs, Youth Knowledge Development Report 1.2. Washington, D.C.: U.S. Department of Labor.

1980c Knowledge Development Agenda. Office of Youth Programs, Youth Knowledge Development Report 1.1. Washington, D.C.: U.S. Department of Labor.

1980e Proceedings of an Overview Conference. Office of Youth Programs, Youth Knowledge Development Report 1.3. Washington, D.C.: U.S. Department of Labor.

1981 Employment and Training Report of the President. Washington, D.C.: U.S. Department of Labor.

1982 Employment and Training Report of the President. Washington, D.C.: U.S. Department of Labor.

The Social Context of Youth Employment Programs

Elijah Anderson

This paper is based on field work in urban black communities and in-depth ethnographic interviews with individuals familiar with youth employment programs, including current and former trainees, supervisors, and community people with a wealth of experience with employment and unemployment. Its primary purpose is to provide insights into the social context in which youth employment programs operate. In part, this is a conceptual discussion. What follows, then, is not a highly systematic accounting of factors related to specific programs, but a more general set of considerations of cultural and community factors that have likely conditioned the effectiveness of youth employment training programs.

The paper begins with a brief sketch of the early days of on-the-job training, in which ethnic whites negotiated the labor market. The social context of today's job-training programs is then described, based largely on the interviews. The third section discusses the values held by, and required of, participants in youth employment programs. A summary and conclusions section ends the paper.

THE EARLY DAYS OF ON-THE-JOB TRAINING

In the 1930s the New Deal instituted what could be called job-training programs. The Works Progress Administration (WPA), the Family Assistance Program (FAP), and other "ABC" programs were initiated to alleviate the pain and suffering caused by the Great Depression. In post-Depression America, youth employment programs as we know them today did not exist. Rather, employers often emphasized on-the-job training.

During that era, many employers in labor-intensive industries relied on the personal references of family and trusted employees for their recruitment pool. In that time, the apprentice system, or an

---

Elijah Anderson is associate professor, Department of Sociology, and associate director, Center for Ethnographic Studies, at the University of Pennsylvania.

approximation of it, was also of prime importance for industrial employment. Various white ethnic group members, the primary source of labor in large urban areas, tended to seek out their own kind for invaluable on-the-job work experience. Both the instructor/mentor and ethnic peers were genuinely interested in seeing the man "work out." And the man usually did work out, for the extent to which he "fit" socially with a supportive work group usually had much to do with his success. The following interview with an 82-year-old Irish American, a still-practicing machinist and automobile mechanic, gives a glimpse of the culture of on-the-job training in those years:

> In the 30s and 40s the guys didn't go to any training program. No, they didn't. They studied, themselves. They had a certain natural ability. And they used that natural ability. In other words, I know a lot of fellows in the automobile business. They didn't go to any school. They didn't go to nothin'. But they learned as they worked. They didn't know if this car needed a carburetor, they didn't know if it needed points. They didn't know nothin'. But they found out. They'd say, "Yeah, I can fix your car. Bring it over here." Then they'd get busy and try this and try that, and finally they'd know how to do these things, see. They'd learn on the job, and the job wasn't supplied by the government. Guys [employers] gave 'em a break. They didn't know what else to do with 'em. What're you gonna do with 'em? You go out in the country, the country blacksmith, he was the guy that fixed the automobiles. He was a general mechanic. As a rule, a good blacksmith is just a very, very clever person, because he knows an awful lot about the materials, the iron, steel, and so forth, tempering the iron, welding and all that. He knows all these things. But he learned it the hard way. He went in with his father when he was a little ... so high. And he grew up in it. His father taught it to him. Now my father taught me a lot. Much of the skills in that day were passed on father to son or mother to daughter.
>
> Uncles and fathers would help the youngsters. If they didn't have that, somebody took them in to help out in a store. A boy would start by going with a store, and they'd start out by sweeping the floor, cleaning the place up, and they'd say in a year, "You can wait on customers," and after a while they'd be in merchandising. They'd ease up the system. They were taught things. Everybody seemed to be interested in something. They were interested in this thing. They'd come in and they took a hold.

The job training described above was common to various occupations, including carpentry, plumbing, and other skilled trades. Such job training occurred most often among white ethnics. Blacks and other minorities were occasionally employed and trained this way as well, but they were often required to accept the hardest, dirtiest, least skill-requiring, and least well-paid occupations, which were essentially left over by whites who had preceded them (see Spear, 1967; Davis and Haller, 1973; Hershberg et al., 1981). Many blacks who were able to acquire an apprenticeship in occupations such as plumbing, masonry, or carpentry were not allowed to join unions or to practice their trades the way white ethnics were (see Marshall, 1965). Often, blacks fortunate enough to possess such skills were required to work independently, and at times sporadically, at less than union scale. The following comments of a 70-year-old black wallpaper stripper are germane:

> I learned masonry in North Carolina. Down there I could find work. Colored people often did this type of work. When I come to Philadelphia [at approximately 30 years of age], they [whites] wouldn't let me work. I couldn't find work even though I was qualified. So I went in business for myself, and started hanging wallpaper, made a living that way. I don't do that no more. I just strip paper, now.

Some of the earliest organized job-training situations were developed in grade schools, YMCAs, and vocational high schools serving working-class youths. In shop classes boys were trained to run machines, such as lathes, and girls were often taught sewing and home economics. At graduation a friend of the family, a relative, or a teacher would serve as a reference for the prospective worker. In this way schools, friends, and families provided important links to the workplace, informally shaping the work settings of the day along ethnic and cultural lines that reflected their neighborhoods, schools, and families (Hareven and Langenbach, 1978).

Sometimes vocational instructors moonlighted at a local shop, where they were "regular guys," but also where they could channel their able students into jobs. A person trusted in one place was usually trusted in the other. Through these placements, the students often gained a trade for life and affirmation of themselves through work. Trainee and instructor alike obtained some affirmation of self-worth and perhaps even closer identification with friendship, neighborhood, or ethnic circles. Such channeling helped to create and support the peculiar racial and ethnic character of certain occupations. For the ethnic group members, these effective, informal job-training efforts were important steps between youth and adulthood. They were effective in part because they were heavily sanctioned by those involved, but also because they were part of a social system; the workplace was receptive to them.

Such social connections and placements were crucial for the effectiveness of early employment-training efforts. People entering such relationships often did so on the promise that they would gain a job in return for their involvement. It was in just this way that young men and women placed in comparatively rewarding employment positions could begin to develop what would become lifelong positive associations with work. Furthermore, in these circumstances the work ethic could be affirmed and reinforced, not only for the individual placed in a meaningful job, but also for his cultural peers, who could look forward to the day when they too might have jobs.

On the negative side, feelings of alienation and injustice could be generated and kept alive within these group structures when people were not pleased with their jobs or the way in which they were treated. In this way hope and expectations were formed and neighborhood solidarity gained. Unfortunately, as these processes occurred, work settings became resistant to incursions by rival ethnic groups and almost impenetrable for members of other racial groupings, particularly blacks (see DuBois, 1899; Spear, 1967; Clark, 1973; Hershberg et al., 1981). Such outlooks and the employment practices consistent with them led to racial and ethnic competition, conflict, dominance, and subordination in a variety of jobs. This in turn gave rise to such evaluations, conceptions, and labels as the "black job," the "white job," "men's work," and, of course, "women's work."

MODERN JOB-TRAINING PROGRAMS

In the 1960s, during the days of the Kennedy administration, job training became more formal, and government-sponsored programs were more firmly established. Bureaucratic rules were developed and elaborated, and a variety of spin-offs were later instituted (see Ginzburg, 1980; Stromsdorfer, 1980). Initially, many participants in these programs were ethnic whites. Over time, the racial and ethnic identities of both instructors and trainees in employment programs began to change. Colored minorities began to make up an increasingly significant portion of program participants.

Under these circumstances, the general effectiveness of work-training programs was severely tested and often found wanting. The solutions for the employment problems of white ethnics often did not work well for blacks and other nonwhites. In the earlier period the ethnic and cultural organization of the ethnic neighborhoods was compatible with that of the work settings into which the trainees moved; in the later period contrasting, if not conflicting, ethnic populations were expected to work together. Although the work settings had formerly been receptive to white trainees, they were not now so for blacks. Discrimination was a problem, to be sure, but also important, the nature of the world of work was undergoing crucial and far-reaching changes.

With widespread and increasing automation and technological development, a certain social fit between training and employment contexts had been lost. Moreover, the structure of employment opportunities that had awaited the ethnic whites was declining as large numbers of blacks and Puerto Ricans attempted to negotiate the labor market (see Doeringer and Piore, 1971; Wilson, 1980; Hershberg et al., 1981). Furthermore, the various social connections to the workplace that had been critical to the successful employment efforts of whites were largely lacking for blacks. It is this lack of social connections and linkages to training and employment contexts that continues to be an important consideration in the effectiveness of current job-training programs.

Instructors and Trainees

In many instances, the instructors in programs of the 1960s were ethnic whites who were fond of remembering how they "came up the hard way," at times invoking the American "bootstrap theory" of social mobility (see Hershberg, 1981). Increasingly, however, many of the new trainees were young black men from urban ghettoes, people their instructors could readily compare negatively with advantaged whites and label as "out to get something for nothing." To many white ethnics, these young black men represented a threat (see Blumer, 1958; Pettigrew, 1980).

In earlier times when mentors taught their protégés a trade or work skill, the process was often slow and guided by the cautious development of trust among participants. The "tricks of the trade" and other occupational secrets usually were only slowly divulged to "worthy," "likable," and "able" trainees, evaluations that were made subjectively and at times arbitrarily.

When young black men were introduced into this type of job training, to be instructed largely by white working-class instructors, the scenario became extremely complicated. A certain amount of tension between divergent cultural groups may be anticipated and perhaps dismissed as normal happenstance. But with the introduction of race and the resulting competition for "power resources," many such instructors were no longer able to view themselves as simply passing on skills and trades to deserving youths (see Bonney, 1972; Wilson, 1973; Kornblum, 1974). Rather, the instructor, who may have viewed himself as a master craftsman, might have sensed that his own group interests were threatened by the prospect of training young black men for occupations once held by members of the instructor's own ethnic group. The instructor was likely to experience some difficulty, if not profound psychological dissonance, in teaching something so dear to him as his trade to people generally defined as outcasts making spirited assaults on areas of influence and privilege traditionally (and legally) reserved for others he might more readily identify as his own kind (see Blumer, 1958; Goffman, 1963; Higginbotham, 1978).

Instructors at times resolved this dissonance by approaching minority trainees with a dubious attitude. Doubtful of the basic potential of ghetto youths, they often relied on racial stereotypes in their dealings with them. But equally important, black trainees were often suspicious of their instructors, at times believing them to harbor racist attitudes and approaching them only with a certain amount of hesitancy and caution. What was ostensibly begun as an instructor-trainee relationship sometimes became a full-blown racial, ethnic, and class contest.

The problem of social friction between instructor and trainee is just one problematic area among many that must be addressed to gain insight into the more general issue of the effectiveness of job programs. First, in addition to the attitudes of teachers toward students, the attitudes of the trainees must be examined. What is the manner in which these attitudes are expressed in both the job-training context and on the actual job? Second, it is necessary to examine the circumstances in which the problematic attitudes of instructors and trainees are expressed and to gain an ethnographic picture of the manner in which often conflicting definitions of the situation meet and become resolved or are left unresolved.

Sources of Conflict

In addition to what might be viewed as a problem of cultural background--the issue of ethnic or class friction or competition--there exists a more manifestly troublesome aspect of the social "fit" between instructors and trainees. The culture of the job-training program, and perhaps the culture of any school situation, clashes with the culture of the ghetto street. The hard-core unemployed are often the embodiment of this street culture. Even to the casual observer, their values appear to be very much at odds with the dominant, middle-class value system represented and often invoked by the staff of a job-training program (see Liebow, 1967; Hannerz, 1969; Wellman, 1977; E. Anderson, 1978; Auletta, 1982).

Certain manifestations of the culture of the hard-core unemployed carry over into the job-training setting and thus contribute to tensions between trainee and instructor. For instance, numerous trainees seem to have difficulty with middle-class concepts of time. From the perspective of the staff, many seem to lack interest in being, or are unable to be, punctual; they seem to accept tardiness as normal happenstance. They may also be absent from class much of the time. Many display what is interpreted by instructors to be a "tough" demeanor; they appear to carry a chip on their shoulder. Some trainees appear to have trouble dealing with authority figures, particularly white male instructors. Instead of an attitude of seriousness, many youths appear to take a cavalier attitude toward the program, appearing simply to be putting in time.

These (what staff members often call irritating) aspects of the trainee's manner of self-presentation aggravate the perhaps already negatively inclined instructor, who may be so inclined for his own group-identification reasons: it is very difficult to comprehend the influence of long-standing and real ethnic, racial, and class hostility in the current job-training setting. But it is an "outsider" class of youths--black ghetto street boys and young men--who by their life-style and demeanor, threaten white and even black instructors from the old working class, causing them to maintain a certain social distance in self-defense. The teacher-student relationship, particularly in an employment-training program, requires a profound degree of trust if it is to succeed, but this needed trust is often sorely lacking, which is another important reason that many of the programs lack effectiveness.

At the same time, program trainees have numerous complaints of insensitivity on the part of instructors. For instance, some instructors are said to close and lock the door at the beginning of class, refusing to open it for someone who is five minutes late. After traveling the 10 subway miles from the north Philadelphia ghetto, some youths are prepared to call the instructor's actions racist, if the instructor is white, or antiblack, if he is black. As one youth explains, "Five minutes ain't a whole lot of time." But the instructor is not inclined to see things this way. The instructor's attitude may be that this black youth fits into the category of a person trying to get something for nothing, without putting in the hard work. Indeed, some youths think 15 minutes one way or the other is simply not that important, or even that missing four or five days of school is of negligible import. But interrelated with the issues of attendance and punctuality are often the trainees' basic problems of a chronic lack of money and, thus, of reliable transportation to the job-training site. Unfortunately, these issues are likely to become confused and interpreted as indicative of behavioral laxity. Many of the hard-core unemployed are likely to receive their "carfare" to the training site one day and spend it all in the next day or so. This population, not unlike those of the middle class or even the working class, has an unlimited list of "necessities" on which to spend money, from liquor to food. When their money is spent, they often lack a means of transportation. Then, after repeated tardiness or absence from training sessions, they fall irretrievably behind, or their aggravated instructors may unsympathetically judge and treat them so; many then become unwilling or unable to participate further.

Feeling discouraged and frustrated, many youths become convinced that the instructor, in being a tough disciplinarian, is not all that supportive or interested in seeing them succeed. The instructor may respond, "Well, if this was a job and you were getting paid, then these are the real expectations. You must be on time, and you must come every day. If you don't come every day, or if you come late, then you're not going to keep that job for very long." Such a lecture makes good sense to instructors. But to many young people in a training context, such invocations, at times sharp tongued, of discipline, attendance, and punctuality may easily be taken as clear evidence of prejudice. Insensitive to these perceptions, and often with a strong sense of commitment to discipline, the instructor may believe it more important to get the trainee back in line.

But getting the youths back in line is not a simple task, again because of what is often a basic lack of cultural compatibility between trainees and instructors, particularly as instructors are prepared to interpret the situation. The trainees often come from an urban environment that has not prepared them to adapt easily to the rules and social etiquette of the workplace. Many of the hard-core unemployed are socialized and conditioned to be "tough" in their encounters with other men, particularly challenging authority figures who are white. They tend to have little faith in whites generally. Their demeanor frequently evolves into a kind of arrogance that is often a defensive display, particularly when confronted by potential threats or challenges to their independence and "manhood." Such a demeanor is thought by many to be absolutely necessary to survive the mean ghetto streets.

After years of such conditioning, a youth meets the job-training instructor. In this situation, the youth must suddenly change many of the behavioral patterns gained through socialization, patterns that he has come to take for granted and to value. It may appear to him that he must now, in effect, humble himself in the face of authority that, whether assumed by a black or white person, is perhaps of dubious legitimacy. The value of changing his behavior is not completely clear to him; he has remarkably little faith, though perhaps much hope, that deference and time spent in the training program will result in meaningful employment.

If employment-training programs are to be effective, they must deliver what trainees want most: meaningful employment. Many trainees must indeed be taught the importance of discipline, punctuality, and good attendance in the workplace, but at the same time, instructors must become sensitized to the special problems, cultural or otherwise, of the hard-core unemployed. The instructor should be able to recognize the cultural problems noted here and then display a certain sensitivity and patience in searching for creative and effective ways to teach and remind youths of their particular shortcomings with regard to the culture of the workplace. Moreover, there should also be clear and identifiable rewards for the trainees and their supervisors for effective behavior and attitudes displayed in the training context.

Instead of sensitivity toward and appreciation of the cultural milieu from which they come, however, trainees often meet with shortsighted behavior, derision, strictness, and control on the part of the instructor. Instructors may feel justified in a tough and defensive reaction, as they believe there is often a need to compete for authority in this context. In their invocations of discipline, they often promote themselves as guardians of the values of work, defending those from their students, whom they must, however, simultaneously teach and ultimately render employable. What begins as an instructor-trainee situation may quickly deteriorate into a contest of ethnic, racial, or class authority.

Significantly, it is not only white instructors who may carry problematic attitudes into job-training situations. Increasingly, many of today's instructors are black and have often emerged from traditional working-class backgrounds. The job-training program is likely to be made up of black trainees and black instuctors. The black instructors may think of themselves as having worked hard to get where they are. Having themselves made it through hard work and much personal sacrifice, they may be inclined to be prejudiced against unemployed black youths. Their feelings may be manifested in an overzealous desire to turn out highly successful black youths, resulting in strong, and at times arbitrary, invocations of discipline in the training process. There is sometimes a fine line between the appropriate invocation of discipline for effective management of training and the manifestation of class prejudice in the form of harassment.

Casualties of the Program

Over time, some young people who participate in youth employment programs become frustrated and demoralized by their experiences. They simply become worn down by the routine of the program and, often because of their inability to make visible "progress," become disgusted with the program and its staff. Progress for them is to feel equipped with marketable skills that will give them a chance to compete effectively for a permanent, well-paying job. Lacking clear signs of progress, many become frustrated and resign from the program, at times in an attempt to retain a sense of manhood and independence. In so doing, many proclaim they would rather "give it up" (trying to obtain a job) than "slave for the man" (to engage in hard labor); a popular ghetto expression for job is "slave."

On leaving, they are in effect "shaken out" of the program. Later, in discussing the program with any interested party, they often recall their worst experiences and characterize the whole program as "a waste of time." In bad-mouthing the program to other members of the community, they seek affirmation and support in having been wise enough to quit the program. As they travel through the community, they seldom have anything positive to say about the program. In effect, they often only draw the cultural boundary between the streets and the programs more strongly and clearly. Insofar as they have prestige on the street, they then influence others to be loyal to the streets by rejecting the programs.

Significantly, many individuals tend not to specify which program they have had a bad experience with, and their listeners often do not require specifics. In such instances, "the program" sometimes refers to almost any and all programs in existence. There is a tendency among community people with no first-hand experience to lump all programs together, not distinguishing between programs, be they federal, state, or local. Reports on a program, good or bad, seem to be readily generalized.

As the casualties of the "program" move on, they fall into other situations that attract them. Some develop time-consuming new projects aimed at financial self-survival, for example a job with a fast-food restaurant, an exterminating company, or a factory. Chance plays an important role here. If employment fails to materialize, some youths have been known to involve themselves in drug dealing and other criminal activity for financial gain; people of the community readily make an association between idle unemployment and crime. Often, as a last choice, those with clear law-abiding intentions may attempt to enlist in military service, but often they are rejected.

Through their travels about the city and the local community, they find it necessary to maintain that their decision to leave the program was a good one. A working conception of oneself and the program develops, complete with excuses and justifications for why things did not work out with the program. In this instance, many conclude even more firmly that a well-paying job for them was simply not possible through any association with the program.

As frustration and disappointment grow, the program also loses relatively mature participants who have a measure of discipline and often the motivation to succeed at using the program for obtaining a permanent job. In fact, this is the initial goal of many of those entering the program. But when they fail to achieve this goal, the serious, and perhaps more intelligent, youths--those with a clear sense of options--move on, wanting no longer to tolerate the "abuse" and tensions with the staff. For many, the main problem here is the prominent failure of the program to deliver on its ostensible promise: a permanent job.

As they move on, the casualties leave behind in the program many youths who possess relatively little in the way of personal or social skills that will enable them to participate effectively in a job-training program. They leave behind those who are not so highly motivated, those with limited options, and the new recruits. Many participants are so poor they have hardly enough food to eat or even a reliable residence; alcohol and drugs are also persistent problems for some.

Program directors might then complain that the pool they now have consists of too many "mental defectives, drug addicts, ex-cons, retarded people, illiterates." Such views, not only among staff but also among community people and prospective trainees, contribute to the stigmatization of the program and ultimately to its ineffectiveness.

Values

The generalized American belief in "pulling yourself up by your own bootstraps" appears at times to work against the credibility of government-sponsored job-training programs. Strikingly, "working for a living," the "bootstrap" ideal, and the avoidance of "government handouts" represent values that many black and other minority Americans share with others (see Hershberg, 1981). Many youths would like nothing better than to realize this ideal, and they work very hard at achieving it.

When such highly motivated youths become involved with a job-training program, they often attain a measure of success. In their classes, they achieve outstanding records. Highly motivated to succeed, such individuals are imbued with self-confidence and a positive outlook, despite the distrust and discrimination they encounter. They appear to emerge from a family and social background that, while financially poor, places much emphasis on self-discipline, self-esteem, and a strong belief in the "work ethic." As they negotiate the training program, they very favorably impress their teachers. When the teachers learn of openings, they do not hesitate to recommend such youths for jobs. It is for these individuals that the program seems most effective. They tend to obtain jobs and move on to negotiate certain areas of the occupational structure. But such individuals, emerging as they do from backgrounds of poverty and discrimination, tend to be rare.

An important policy issue for those interested in increasing the effectiveness of youth employment programs is that of how to instill the attitudes and behavior patterns of successful individuals into other trainees. This would require serious and effective training sessions devoted to discipline and motivation. But there must also be some change in the attitudes of staff people who seem to expect too little from minority youth. Youth employment programs need effective teachers who possess the sophisticated knack for discerning the unexhibited potential of trainees and who are able and willing to help the trainees "find themselves." But at the same time, program staff must be willing and able to help place the youth in meaningful employment after they complete their training.

Given the realities of the employment arena, including ethnic and racial competition and the prospective employer's often profound distrust of black youths, placement appears to be one of the most troublesome aspects of the training process (see E. Anderson, 1980). Yet it is this aspect that ultimately determines the effectiveness of the program. Unfortunately, too many trainees pursue the programs, graduate, and are then left in the same shape they were in before they became involved in the program. It is this result that repeats itself far too often, lending credence to negative commentary on the programs within the minority communities. The comments of one former program participant are relevant:

> As far as I know, no one [of his job-training cohort] got a permanent job. Like, I got a job for a year, right? What could I have done? That was money I made and spent on clothes, a little carfare. You couldn't make no moves [to get married, for instance, to buy an automobile, or to rent an apartment] with it. Now with my program, the people made it for themselves. Now the director of my program went on to a multimillion dollar insulation program. He contracted his work out of Jersey, New York, and cities in this area here. Pittsburgh. He went to Reading, little cities and towns in Pennsylvania, Ohio, Delaware. But he did not take none of those people that was involved in his program. And he liked me! But he never invited me to do insulation work. Because he most likely wasn't confident in what they were teaching us. And you knew it wasn't enough, because the extent of the weatherization program we went to was plastering holes, putting on the heat blanket, Mortite, caulking a window. That was the extent of the matter. But he took it farther than that. He insulated all the pipes of people's homes. He contracted all the work in all these new buildings. So before anybody move into these houses he was insulating them.
>
> What I'm saying is that the whole program was about somebody taking an interest in hiring these young people, to give them permanent jobs. That was the whole thing. That's what they were asking these companies to do. Yet and still this man took on a multimillion dollar program of his own. He started it without a dime. His name and a couple of his references got him maybe a million dollar loan from a bank [the accuracy of this figure is uncertain]. But he did not take no one with him. He took one of the instructors. He gave another instructor money to start his own glass block company. And these are now reputable companies. You look in the white pages or the yellow pages, and you'll see these companies.

Because of such experiences, many youths approach job-training programs with a certain generalized suspicion of "programs."

On many occasions, the program "advertises" itself on ghetto streets, where instructors and trainees, perhaps unwittingly, are at times under the watchful eyes of prospective trainees. Following are some comments by a black male, 21 years old, who only briefly considered becoming involved as a job-training participant:

> I was on the street once and one of the CETA supervisors sent one of the guys across the street to pick up some material. And because the store, the clerks, did not wait on him promptly, the supervisor came across the street and hollers at the guy like, "What the hell are you still waiting over here for?! Get yo' ass across the street!" Now, I'm talking about seeing him do this in a store full of people, you know. I mean, the guy must've felt bad. I know I would've felt bad. And then the supervisor, after that, he turned around, he laughed about it. That just shows you how they treat the workers.

In the foregoing incident both the supervisor and the trainee were black men, an indication that conflict and tension between supervisor and trainee are not simply or always a function of interracial relations but sometimes a function of hierarchy and the promotion of discipline itself. Yet, importantly, such incidents do little for the community's image of the job-training program.

On the basis of such treatment by instructors, the already suspicious trainee may question the instructor's ability to make a commitment to teaching him anything. But trust in the instructor's ability is essential to any worthwhile mentor-trainee relationship. Hence, the relationship between the ghetto youth and the instructor is a difficult one and can contribute to the ineffectiveness of the general program. But equally important, in such scenarios, told and repeated in the ghetto community, "the program" is made to seem increasingly unattractive, again contributing to its disvalued status.

Thus, in many communities, the program has a "bad name," and a reputation for being "a sham" and "a waste of time," leading many to believe that participation is not a very worthwhile way to spend one's time, even if the person is unemployed. This is indicated in the following interview with a 21-year-old youth, who had been involved with "the program" and had worked in a related job for a year, but who felt he had really not advanced from where he started:

> Boy, these programs were very misleading, 'cause they were very unsuccessful. Led the people to believe they would get permanent jobs. And they had the right people there. They had the motivators. They had the people there who talk good [convincing], the cons, and all that. But I told 'em when they talked to me like that. See, I don't take things at face value. When somebody tell me "I can get you permanent work," I want them to take it into parts. Tell me why you think that. Do you know somebody who's gon' give me permanent work?

> The program was a waste of money, a waste of time, very misleading, and it got a very bad rep in the community. They got the community all involved. Now, this happened in '81 and '83. A number of the people wouldn't believe in it from the beginning. And the ones who do get involved will be involved only for the money, only if there's a salary involved. It's just a band-aid. Everybody lacks confidence in it. It was a political act. They hired all these young guys just to get them off the street. It would be to your advantage not to be involved. Because it takes up time, and time is money. You start off with confidence, but down the line you gon' be let down. I don't know anyone that took that [was involved in the program] that's now independent. If they were on welfare before they started the program, they got back on. The program is just a sham. It was just a political move. People playin' chess with other peoples' lives.

That general population toward which government-sponsored employment programs are usually geared, the hard-core unemployed, can generally be described as youths whose employment prospects are quite limited even as they enter high school. There, decisions are made that affect the scheme of their entire lives. The tendency is for the young black man from the inner city to either quit or socially "graduate" from a segregated urban school unable to read, write, or compute. Given the large amount of distrust for black males in the urban environment, he has little chance for permanent, gainful employment.

Some youths may become involved in "dealing" drugs, which can involve anything from marijuana to heroin. Today, one does not have to be a full-time "professional" dealer to be employed in the drug business; one can often engage in this criminal activity only part time, and sometimes for as little as a $10 initial investment. Simple participation is often contingent upon and a result of a need for money. A person may get involved in the illegal selling of drugs the way a gambler would bet on a horse or play a slot machine: he has money for the moment to gamble in the hope of a quick return; he may have as much as $10 or $20 and want to double it. He buys the drugs wholesale, carries them around, and attempts to sell them. Such behavior is in reality a large gamble. If he "wins," he earns a profit; if he loses, he could wind up as a victim of violence for selling "bad" drugs or for being part of a misunderstood deal, or as an inmate in jail if he tries to sell to the wrong person and is found guilty of possession. Although he may venture into drug dealing on a lark, he is very serious about his need for money. He may win this time, and if he does, he is back into circulation for a while. While pursuing this life-style, he continues sporadically to look out for a job. When he sees a sign in a window for "help wanted," he's uncertain that the sign applies to him; he believes he will be turned down. He has been turned down so often he expects "no," even though he may have witnessed the sign being placed. Prospective employers often stereotype, distrust, and fear him. On an existential and experiential level, he knows this well. With a series of such experiences, he becomes frustrated and increasingly discouraged.

At this point he may see signs on bulletin boards at the community center about "job training." As he looks into this, he does so with some suspicion, for he personally knows few people, if any, who have obtained a permanent job through a job-training program. Yet with few employment options, he looks into the job-training program. He becomes involved, hoping to gain a permanent, well-paying job. But he approaches the program with cautious hope. In time, he comes to see that marketable skills that would make him truly competitive in the workplace are not being offered. The "skills" that are being offered, he thinks, one should not have to spend time in school for. For example, after being promised that he will be taught carpentry, he is taught to caulk windows instead. He begins to believe the program is a sham, a waste of his time. He begins to lose interest, yet he has few employment options and desperately needs money. He will do almost anything at this point, though he badly wants a "good job," preferring to have a law-abiding occupation. Becoming socially involved with his fellow trainees, he remains with the program for two or three months. Later, he "lucks up" on a job caulking windows for $3.50 an hour and remains employed for a year. At the end of a year, he realizes that he's getting nowhere; thinking about his future he decides to join the army. He attempts to enlist, but he is rejected because he lacks a high school diploma; if he wants to enlist, he must attend night school or somehow gain a General Equivalency Diploma.

Among some youths enlistment in the military is a matter of last resort. The following comments by a black, 22-year-old Philadelphia taxicab driver are relevant:

> I was involved in a summer jobs program. It didn't work out. They had me working at a hospital. But the people didn't really want me there. I was there for a couple of months, and the first thing I know, I was fired. I never could get a reason for it. They wasn't writing me up or nothing, but they did complain about me, little petty stuff. I got on [became employed] with the cab company and started driving a cab. What they really need to do is just get people permanent jobs. . . . The military has helped a couple homies [close friends] of mine. But I wouldn't go in. I would have to be doin' boss [very] bad to do somethin' like that.

Unfortunately, many young men who are without jobs and prospects strongly feel that they have only their manhood and their toughness, and until they gain something better they will try to retain that. In attempting to do so, they often find a certain local acclaim and self-esteem among peers in fathering children out of wedlock, engaging in petty and even serious street crime, selling drugs, or burglarizing homes. They are often left to approach "trouble" for personal affirmation and gloat or brag about running and shooting encounters with other young men or the police. Their resolution of a dire need for employment and money is sometimes to involve themselves in some form of antisocial behavior, perhaps winding up in jail or in the military; judges have been known to give the young man a choice.

In addition to the poor reputation youth employment programs have acquired in minority communities, it is important to consider the reputation of work as it is so often defined and emphasized by such programs. So often the jobs for which youths are being trained are thought of as dead end and menial; it is difficult for the youth to perceive the possibility of real advancement through such work. The training is often perceived as conferring low status on a person, who frequently possesses an expanded sense of racial and personal pride (see E. Anderson, 1980). This again raises the issue of "strain" or lack of social "fit" between the older instructors and the younger trainees. The instructors in the program share certain beliefs and values concerning work, work settings, propriety, and the work ethic. Many profess to believe in "hard work" for just rewards. This is perhaps an outmoded notion in our contemporary society, especially among many ghetto youths who are mobile about town and are readily able to view others of their color-caste riding trolleys, trains, and buses and dressed in pinstriped suits and carrying briefcases. They have come to see this model, to wonder about him, and perhaps to desire to emulate him.

Yet these youths have little real chance of moving toward being that sort of man, the young professional, if they are being trained to be a carpenter, and poorly at that. Common sense tells them that such jobs are closed to them and their kind; from their elders, they've heard the tales of discrimination, and many have experienced it firsthand. Hence, many youths approach the program with a limited amount of motivation. Many are ambivalent about the value of such a program, even if they were to be successful in completing it. For ultimately, the program prepares the young people for jobs many have come to see as "beneath" them, and hence, the more they invest in terms of time and energy, the more they believe they condone what is in their estimation an essentially inferior social and economic position, not to mention the boredom and toil that come with it. Yet they want jobs badly.

Many older black workers, including laborers, masons, and plasterers, say that today's youth won't work. Perhaps, youths are growing up in a society in which physical work, in its strict working-class definition, is simply declining as a value. Having a job is surely important, but valued activities are often those that can be done in a suit and tie, not a pair of coveralls. The very place of the term "working class" in our lexicon, a place below all other classes save the very poor, is a clue to and passes along society's valuation of the place of "workers."

Many of today's youths who do not want to work may be seen less as disconnected from society's values than as sharing the valuation a great many people place on physical labor; these youths are very much up-to-date and very much connected. With their high aspirations and intermittent, often unrealistic, expectations, they are simply under-educated, untrained, and lacking in the nonphysical skills necessary for entry into labor markets with jobs for professionals. In a sense, minority youths are held accountable to values of physical work that seem in decline in the face of increasing automation and technology change (see Wilson, 1980; Hershberg, 1981; and B. Anderson, 1981).

SUMMARY AND CONCLUSIONS

The foregoing account illustrates how the earlier ethnic experience was very different from that of blacks and other colored minorities today. The job market was much more receptive to the ethnic whites, who had common skin color and a certain compatibility with the system of work. This general receptivity inspired many to be highly motivated. Discrimination did not exist to the degree that it now does for blacks and other colored people. Family and friends were often supportive, on and off the job. These primary reference groups helped them to "work out," in part because they were representing people who had helped them find work through word of mouth, but also because they could often identify with those they were joining in the workplace (see Shibutani, 1955). Given the need for labor, there was on-the-job training for those who had no skills.

Strikingly, this supportive environment does not exist for minority youths. Individuals--black or white--do not go out of their way to help such youths. Equally important, minority youths, beaten down by the specter of distrust and discrimination, are often resigned to their position. And because of this, many are unwilling or unable to recognize and seize opportunity. From both sides--instructors and trainees--there seems to be a profound lack of confidence in the ability of the trainees to make progress in the job market. Many who would employ black youths share this lack of confidence and often a prejudice that the hard-core unemployed and their culture are truly not compatible with the work setting. Such attitudes represent major obstacles to the employment of youths after they have completed job training and, thus, are important considerations for the effectiveness of training programs.

The trickling out of talented instructors is another critical factor affecting the effectiveness of employment programs. Since national and local politics often play such an important role in the employment programs, funding is variable and at times unpredictable. As the programs receive decreasing or fluctuating funding, they become increasingly unable to attract and retain effective teachers who are likely to place their students in permanent and well-paying jobs. As the teacher's salary becomes uncertain or declines, he or she may lose a sense of commitment to the program. The better instructors may seek better-paying jobs, often in the private sector, or they may retire. Such people are important resources for the programs, in part because of their work skills and their teaching abilities, but also because of their connections with the private sector and their interests in placing their more able students. In the early days, it was just such types of individuals who served ethnic whites as effective links between vocational schools and the work setting. But these people are rare today, given the low salaries of instructors and job insecurity. Their absence bodes ill for the effectiveness of employment training programs.

Increasingly, attempts are made to replace such people with their aides, who now begin to teach, but who are not as highly qualified as their former teachers. Equally important, they sorely lack their teachers' credibility and connections with the workplace. If former aides possessed such connections, it may be argued, they might take advantage of them for themselves.

Participants in the programs at all levels often feel a high degree of uncertainty about the program's immediate future. Social and cultural tensions between many trainees and their instructors have perhaps increased. Yet the primary issue concerning the programs stems from the inability of the programs to place participants in gainful occupations. The largest complaint among black youths seems to be that the programs fail to deliver permanent jobs. More attention must be given to this critical issue. It is chiefly because of this failure--and perceptions of it--that relatively few trainees have positive evaluations of the programs. When the trainees obtain jobs, they often feel they could have obtained the job without having gone through the program.

Some mechanism must be instituted for accountability in the training program. To be effective, programs must be result oriented. After training, participants must be placed in gainful, rewarding occupations. A novel but perhaps very effective solution to the problem of placement may be a guarantee of a job to each trainee who successfully completes the program. Such jobs would be preferably those in which the person could clearly expect a degree of financial security or mobility for his honest and diligent efforts. In this effort to solve what is too easily viewed by many as an intractable social problem, the private sector must become much more deeply involved. Along with the federal government, corporate America must play a more direct and important role in the training and placement of young people. Training programs must be made to work. When trainees are well trained and systematically and effectively placed in gainful employment situations, they will declare the program effective and successful. Then young unemployed people will be standing in line to enroll in job-training programs instead of having to be recruited as they are now.

REFERENCES

Anderson, Bernard
1981 How much did the programs help minorities and youth? In Eli Ginzberg, ed., Employing the Unemployed. New York: Basic Books.

Anderson, Elijah
1978 A Place on the Corner. Chicago, Ill.: University of Chicago Press.

1980 Some observations on black youth employment. Pp. 64-87 in Bernard Anderson and Isabel Sawhill, eds., Youth Employment and Public Policy. Englewood Cliffs, N.J.: Prentice-Hall

Auletta, Ken
1982 *The Underclass*. New York: Random House.

Blumer, Herbert
1958 Race prejudice as a sense of group position. *Pacific Sociological Review* 1(1).

Bonney, Norman
1972 Unwelcome Strangers. Unpublished Ph.D. dissertation. University of Chicago.

Clark, Dennis
1973 The Philadelphia Irish. In Allen Davis and Mark Haller, eds., *The Peoples of Philadelphia*. Philadelphia, Pa.: Temple University Press.

Davis, Allen, and Mark Haller
1973 *The Peoples of Philadelphia*. Philadelphia, Pa.: Temple University Press.

Doeringer, Peter B., and Michael J. Piore
1971 *Internal Labor Markets and Manpower Analysis*. Lexington, Mass.: D.C. Heath.

DuBois, W.E.B.
1899 *The Philadelphia Negro*. Philadelphia: University of Pennsylvania Press.

Ginzburg, Eli
1980 *Employing the Unemployed*. New York: Basic Books.

Goffman, Erving
1963 *Stigma*. Englewood Cliffs, N.J.: Prentice-Hall.

Hannerz, Ulf
1969 *Soulside*. New York: Columbia University Press.

Hareven, Tamara, and Randolph Langenbach
1978 *Ameskeag: Life and Work in an American Factory-City*. New York: Pantheon Books.

Hershberg, Theodore, ed.
1981 *Philadelphia: Work, Space, Family, and Group Experience in the 19th Century*. New York: Oxford University Press.

Hershberg, Theodore, Alan N. Burstein, Eugene P. Ericksen, Stephanie W. Greenberg, and William L. Yancey
1981 A tale of three cities: blacks, immigrants, and opportunity in Philadelphia, 1850-1880, 1930, 1970. In Theodore Hershberg, ed., *Philadelphia: Work, Space, Family, and Group Experience in the 19th Century*. New York: Oxford University Press.

Higginbotham, Leon
1978 *In the Matter of Color*. New York: Oxford University Press.

Kornblum, William
1974 *Blue Collar Community*. Chicago, Ill.: University of Chicago Press.

Liebow, Elliot
1967 *Tally's Corner: A Study of Negro Streetcorner Men*. Boston, Mass.: Little, Brown.

Marshall, Ray
1965 *The Negro and Organized Labor*. New York: John Wiley & Sons.

Pettigrew, Thomas
1980 Prejudice. Pp. 820-829 in Stephan Thernstrom, ed., The Harvard Encyclopedia of American Ethnic Groups. Cambridge: Harvard University Press.

Shibutani, Tomatsu
1955 Reference groups as perspectives. American Journal of Sociology 60(May):562-569.

Spear, Allan
1967 Black Chicago. Chicago, Ill.: University of Chicago Press.

Stromsdorfer, Ernst W.
1980 The effectiveness of youth programs. Pp. 88-111 in Bernard Anderson and Isabel Sawhill, eds., Youth Employment and Public Policy. Englewood Cliffs, N.J.: Prentice-Hall.

Wellman, David
1977 Putting on the poverty program. In David M. Gordon, ed., Problems in Political Economy. Lexington, Mass.: D.C. Heath.

Wilson, William J.
1973 Power, Racism, and Privilege. New York: Macmillan.
1980 The Declining Significance of Race. 2d edition. Chicago, Ill.: University of Chicago Press.

Youth Joblessness and Race: Evidence from the 1980 Census

George Cave

In 1983 the Census Bureau released microdata based on the "long-form" questionnaire completed by about one-fifth of the respondents in the 1980 Census. "Public-Use Microdata Sample C" identifies the "type of area"--central city, urban fringe, rural, and so on--for a full 1 percent of the U.S. population (Bureau of the Census, 1983). The large size of this data set enables researchers to study the impact of area type and many other factors on a multitude of individual variables measured by the questionnaire. In addition to the 1 percent population sample, a 0.1 percent subsample provides data on 226,947 individuals surveyed in the 1980 Census.

This paper compares the data on unemployment and other labor force behavior reported for black youths with that reported for white youths. The key question addressed is, Do black youths face special problems in the labor market due to their race? A related question is whether correcting black and white youth labor force statistics for location, education, family income, and other factors tends to eliminate the racial differences. This paper, like most others in the empirical literature on youth unemployment, uses simple single-equation methods to correct for these factors. However, the results must be interpreted very carefully for several reasons. First, most coefficients estimated on data for individuals are subject to "ecological correlation bias" if the labor market characteristics of the respondents' local areas are missing from the data set. Second, the most common single-equation or system methods may not estimate structural coefficients for individuals' and employers' behavior. Third, single-equation methods introduce simultaneity bias if, for example, the probability of unemployment influences the probability of labor force participation. Finally, even system methods may ignore some simultaneity and overcorrect for factors other than race. To some extent, residential location within the local labor market, quantity and quality of education, family income, and so on are, like unemployment, partly the consequences of race in the labor market. To ignore the effect of race on these determinants of labor

---

George Cave is on the staff of the Manpower Demonstration Research Corporation.

force status is to ignore the indirect labor market effects of race on unemployment.

This paper is organized as follows. First, the data sets and the statistical methods used most extensively in this study are described. Next, a brief overview is given of the seasonal, cyclical, frictional, and structural components that complicate empirical analysis of the youth unemployment problem. This section also includes a survey of several earlier empirical analyses. The empirical analysis of the labor force status of out-of-school black and white teenagers included in the Census microdata follows. Then the very different behavior of those teenagers who were enrolled in school at any time during the two months before Census day is explored. The paper ends with a summary of the major findings.

THE DATA

The 0.1 percent subsample of "Public-Use Microdata Sample C" has 226,947 self-weighting observations on individuals. Of these, 8,653 are young men aged 16-19. Because only 1,190 of these young men are black, stratifying the sample by region, education, and other factors produces some data cells with no nonwhites. The problem becomes even more severe when students are excluded from this group; there remain 2,061 white males, but only 372 black males. Fortunately, it is easy to increase the number of nonwhites by a factor of 10 by using the full 1 percent sample of nonwhites. However, calculations based on stratified samples containing nonwhites from the full C sample but only those whites in the 0.1 percent subsample require special techniques. Heteroscedasticity could arise from the 10-fold greater chance a nonwhite respondent had to get into such stratified samples. Still, the huge Census microdata samples enable appropriately cautious researchers to home in on interesting subgroups in ways that smaller samples do not permit.

The main dependent variables used here reflect labor force status during the week of the Census survey.[1] Unfortunately, questions that would have identified "discouraged" workers during the survey week were not asked. However, analyzing nonstudents separately picks up some part of the often-neglected behavior of those who are not in school yet are neither employed nor unemployed.

---

[1] This measure of labor force behavior is the most common. Alternatives are available: the number of weeks spent in unemployment and in employment in 1979 are recorded for everyone 16 years and older in "Public Use Microdata Sample C." Survey-week labor force behavior is related systematically to weeks and spells of unemployment over the course of a year; see Betsey (1978) and Hanoch (1976). Using survey-week behavior does not distinguish between the short-term and long-term unemployed.

Other variables available for all respondents include census region, type of area, householder status, age, race, marital status, disabilities, years of school completed, whether the respondent has ever worked, and income status. For those with at least some employment in 1979, earnings, usual weekly hours, and industry in which employed are also available. Unfortunately, crucial variables that are not available include actual hourly wages, the number of spells of unemployment in 1979, the number of job offers refused during job search, and eligibility for unemployment compensation.

METHODOLOGY

Two basic methods are used in this analysis to compare black and white labor force behavior. Both attempt to explain dummy variables for employment, unemployment, and nonparticipation. When black and white samples are combined, and when race is one of the independent variables, the coefficient of race shows the increase in the probability of the behavior, conditional on the other independent variables, that can be attributed to being black. As in Freeman (1982), linear probability models (LPMs) are estimated because they explain quite simply some important relationships among the three dependent variables. However, because of well-known econometric difficulties with linear probabilities, logistic methods are used as well.[2]

Using both methods, linear and logistic, equations are estimated for two types of dependent variables, unconditional and conditional. Unemployment and employment equations are estimated both for the entire population and for labor force participants only. In these models, the coefficients for conditional employment and unemployment have the same magnitude, but different signs. The next section points out structural interpretations for the conditional equations; these reflect employer behavior and make the unconditional equations reduced forms confounding employer and individual structural coefficients.

OVERVIEW OF THE YOUTH UNEMPLOYMENT PROBLEM

The Many Faces of Unemployment

Even though economists have produced a large literature on unemployment and take many separate approaches to the subject,[3] not much fundamental progress has been made in explaining unemployment. An adequate economic explanation of unemployment would separate relevant factors reflecting the preferences of individuals for consumption of goods and uses of time from factors constraining individuals' choices about consumption and work. Moreover, such an explanation would systematize many of the stylized facts about unemployment. Further, such an explanation would yield empirically testable hypotheses for existing data about unemployment.

---

[2] See Nerlove and Press (1973:Ch. 2). The LPM predicts probabilities outside the unit interval, is subject to heteroscedasticity, and in general does not fit the statistical assumptions underlying least squares regression.

[3] Two important strands of this literature are largely theoretical: macroeconomic general equilibrium and wage-search distributions. Hey

One problem is that the same word, unemployment, is used to denote many very different phenomena. For a long time, empirical work on unemployment among individuals has tried to classify such unemployment as "seasonal," "cyclical," "frictional," or "structural," although it has been recognized that a given spell of unemployment for a given individual might be very difficult to categorize.

Seasonal and Cyclical Unemployment

One sort of seasonal unemployment is a characteristic of certain occupations, such as construction work. Workers committed to such occupations generally do not take other kinds of jobs during the off-season, perhaps because their wages reflect compensating differentials for the known risk of unemployment at certain times of the year. This sort of demand-side unemployment is unlikely to affect young people, who generally have not yet committed themselves to occupations.

The failure of schools and colleges to stagger their vacation periods produces another kind of seasonal unemployment,[4] which can be attributed to the supply side of the youth labor market. A deluge of young people compete for relatively few jobs each summer. If the kinds of jobs young people take during their summer vacations paid lower wages, some have argued,[5] the problem would be smaller.

Cyclical unemployment occurs less predictably and is tied to the business cycle and to cycles of product demand within industries. There has been a great deal of recent work on the nature of long-term contracts between firms and workers who are periodically laid off temporarily and then rehired. Feldstein (1976) estimated that 75

(1981) provides a survey. Some important articles in the empirical literature are cited in the next section.

[4] However, Clark and Summers (1982:209) cite gross flow evidence that demand for young workers, on the whole, adjusted remarkably well to increased supply during the summer over the years 1968-1976. They surmise from preliminary statistical work that federal Neighborhood Youth Corps and CETA programs may explain their surprising findings on this point.

[5] See Brown (1981) for a survey of many of the issues surrounding minimum wage differentials for youth.

percent of laid-off workers in manufacturing subsequently are rehired by the same employer. He cited 1975 evidence that 41 percent of unemployed men aged 25-64 who had been laid off had made no attempt to find jobs during the previous month. However, since young people tend not to have made solid commitments to particular firms or even to particular industries, temporary-layoff theories are less-convincing explanations for their unemployment than for the unemployment of older workers.

The next subsection provides rough evidence that even cyclical unemployment tied to the business cycle is less important for younger people than for more-established workers. This lack of cyclical sensitivity is reassuring, since elsewhere in the paper I focus on cross-sectional data pertaining only to March 1980 and calendar 1979.

Cyclical Sensitivity of Youth Unemployment

Because I talk about a single cross-section of individuals in the remainder of the paper, I do not have much to say about cyclical influences on youth unemployment. How important are they?

Persistent unemployment of at least 3.5 percent (measured as annual averages of monthly Current Population Survey estimates) has afflicted the U.S. civilian labor force since the mid-1950s. The aggregate rate fell from 5.5 percent in 1954 to 4.1 percent in 1956. Then it jumped to 6.8 percent with the 1958 recession. It fell again to 5.5 percent in 1959 and 1960 and then rose abruptly to 6.7 percent for 1961. With the exception of a slight faltering in 1963, it fell steadily from its 1961 level until it reached the post-1953 trough of 3.5 percent in 1969, a war year. Since then, as Table 1 shows, it rose in 1970 and 1971, fell in 1972 and 1973, rose through 1975 to a three-decade peak, and fell to the 1979 low preceding the most recent recession.

Although the aggregate time series is sensitive enough to reveal broad trends, it masks a great deal of the labor market behavior that disaggregation reveals. In addition to aggregate unemployment rates, Table 1 shows unemployment rates for certain sex, age, and race groups, including groups of teenagers 16-19 years old. With the exception that teenage unemployment was below 12 percent for the three years preceding 1958, 1969 was the post-1953 trough for each of the disaggregated series as well as for the aggregate unemployment rate. But many of the disaggregated series have kept the same rank relative to each other ever since 1950. Moreover, some of the series are much more stable over time than others.

Table 1 shows coefficients of variation (ratios of standard deviations to means) for the aggregate series and for 20 disaggregated groups for the period between 1972 and 1982. It also shows the rank of each coefficient of variation (c.v.) among the 21 coefficients reported. The aggregate series ranks 14th at 21.09 percent. All 7 groups of teenagers rank above the aggregate series; in fact, the teenage groups account for 4 of the top 4 groups and 7 of the top 11 groups. The coefficient for the top group, black women aged 16-19, is barely a third of the aggregate coefficient. At the other end of the

TABLE 1 Annual Averages of Monthly Unemployment Rates, Civilian Labor Force 16 and Older

	Ag-gre-gate	20 and Older	16-19	Men 20 and Older	Men 16-19	Women 20 and Older	Women 16-19	White Men 20 and Older	White Men 16-19	Black Men 20 and Older	Black Men 16-19	White Women 20 and Older	White Women 16-19	Black Women 20 and Older	Black Women 16-19	Men 16 and Older	White Men 16 and Older	Black Men 16 and Older	Women 16 and Older	White Women 16 and Older	Black Women 16 and Older
1972	5.6	4.5	16.2	4.0	15.9	5.4	16.7	3.6	14.2	7.0	31.7	4.9	14.2	9.0	40.5	4.9	4.5	9.3	6.6	5.9	11.8
1973	4.9	3.9	14.5	3.3	13.9	4.9	15.3	3.0	12.3	6.0	27.8	4.3	13.0	8.6	36.1	4.1	3.7	8.0	6.0	5.3	11.1
1974	5.6	4.5	16.0	3.8	15.6	5.5	16.6	3.5	13.5	7.4	33.1	5.1	14.5	8.8	37.4	4.8	4.3	9.8	6.7	6.1	11.3
1975	8.5	7.3	19.9	6.8	20.1	8.0	19.7	6.2	18.3	12.5	38.1	7.5	17.4	12.2	41.0	7.9	7.2	14.8	9.3	8.6	14.8
1976	7.7	6.5	19.0	5.9	19.2	7.4	18.7	5.4	17.3	11.4	37.1	6.8	16.4	11.7	41.6	7.0	6.4	13.7	8.6	7.9	14.3
1977	7.0	5.9	17.8	5.2	17.3	7.0	18.3	4.7	15.0	10.7	39.2	6.2	15.9	12.3	43.4	6.2	5.5	13.3	8.2	7.3	14.9
1978	6.0	5.0	16.4	4.3	15.8	6.0	17.1	3.7	13.5	9.3	36.7	5.2	14.4	11.2	40.8	5.2	4.5	11.8	7.2	6.2	13.8
1979	5.8	4.8	16.1	4.2	15.9	5.7	16.4	3.6	13.9	9.3	34.2	5.0	14.0	10.9	39.1	5.1	4.4	11.4	6.8	5.9	13.3
1980	7.1	6.1	17.8	5.9	18.3	6.4	17.2	5.3	16.2	12.4	37.5	5.6	14.8	11.9	39.8	6.9	6.1	14.5	7.4	6.5	14.0
1981	7.6	6.5	19.6	6.3	20.1	6.8	19.0	5.6	17.9	13.5	40.7	5.9	16.6	13.4	42.2	7.4	6.5	15.7	7.9	6.9	15.6
1982	9.7	8.6	23.2	8.8	24.4	8.3	21.9	7.8	21.7	17.8	48.9	7.3	19.0	15.4	47.1	9.9	8.8	20.1	9.4	8.3	17.6
Mean	6.86	5.78	17.86	5.32	17.86	6.49	17.90	4.76	15.80	10.66	36.82	5.80	15.47	11.40	40.82	6.31	5.63	12.95	7.65	6.81	13.86
Stan-dard Devi-ation	1.45	1.41	2.44	1.62	2.96	1.11	1.86	1.46	2.78	3.40	5.45	1.04	1.76	2.06	2.94	1.71	1.54	3.42	1.13	1.08	1.95
C.V.	21.09	24.33	13.68	30.53	16.59	17.09	10.38	30.58	17.62	31.86	14.80	18.00	11.36	18.07	7.21	27.12	27.33	26.38	14.77	15.93	14.04

SOURCE: Data from U.S. Department of Labor, Bureau of Labor Statistics, *Handbook of Labor Statistics*, Bulletin 2175 (Washington, D.C.: U.S. Department of Labor, 1983):68-72.

BEST COPY AVAILABLE

scale, groups containing older men account for all of the bottom six ranks. Older women tend to rank just below the groups of teenagers. Thus, from a disaggregation of time series using coefficients of variation to index instability, it can be seen that older men's unemployment is most susceptible to macroeconomic forces exerted on all demographic groups over time, while teenage unemployment is influenced least by such forces.

Frictional Wage-Search Unemployment

Frictional wage-search unemployment results from the dynamics of labor markets. People move in and out of the labor market as they age, as their skills change, as wage levels rise and fall, and as family needs and financial fortunes vary.[6] Jobs are created as firms are established, as plants are opened in new areas, and as older workers are forced to retire.[7] But it may take a few weeks for would-be workers and firms with vacancies to search out and find each other. A job applicant might not take the first offer of wages and working conditions, and a firm might not be willing to meet the first applicant's wage bid. Such "search" unemployment might affect young people disproportionately more than adults,[8] because they are making gradual transitions from full-time schooling to full-time labor force participation. Young people experiment with industries and occupations before making lifetime commitments. Sometimes they have parents to support extended periods away from both school and the labor force, and sometimes they might misreport such nonparticipation as unemployment.

According to "search theories" of frictional unemployment,[9] heterogeneity among individuals and among firms leads firms to search for workers and individuals to search for vacancies. The latter type of search has virtually been identified with unemployment by many labor economists, usually under the restrictive assumption that the utility function governing individual behavior is defined over discounted future wages, net of search costs but ignoring foregone leisure.

---

[6] When movement into the labor force exceeds steady state levels, structural unemployment may arise in addition to frictional unemployment. It may take some time for employers to adjust their hiring and wage policies to the increased supply of potential employees.

[7] Destruction of jobs by the same kinds of processes may lead to structural unemployment for established workers at the same time that it creates frictional unemployment for new entrants into the same or another job market.

[8] But see note 15 below.

[9] See Hey (1981:Ch. 5) for an accessible survey of this literature.

According to these theories, every worker is unemployed because he turns down all proffered vacancies until he has been offered his acceptance wage. The acceptance wage is the wage such that there is no marginal gain in expected utility from continuing to search. Though firms search for workers, if only in the sense that they do not necessarily hire the first applicant for a given vacancy, most search theories tend to ignore this phenomenon and attribute unemployment solely to workers' searching for firms. The testable assertion here--that the unemployed have refused actual job offers--has not been pitted against empirical evidence very often. But when it has been tested, the idea that most of the unemployed have refused wage offers has not fared well.[10]

Structural Unemployment

In contrast to voluntary, frictional unemployment is the notion of involuntary, structural unemployment, which is defined by Killingsworth (1978:22) as "joblessness--usually long-term--which results from basic changes in the economic structure: new technology, the decline of some industries and the growth of new ones, geographic relocation of industries, permanent changes in consumer tastes, changes in labor force characteristics, and so on."[11]

For unskilled workers, among whom are most young people, legal minimum wages or high union wage scales may be an important barrier to employment.[12] In an important theoretical paper, Weiss (1980) shows that even in the absence of legal minimum wages or union pay scales, firms may find it optimal to set wages fairly high and to refuse to employ members of certain demographic groups, even though they are willing to work for lower wages.

---

[10] For example, Rosenfeld (1977) has reported empirical work on the 3,238 out of 4,668 unemployed in the May 1976 CPS who answered supplementary questions on their job-search behavior. The high nonresponse rate and low potential for disaggregation indicate a need for more special surveys of this kind. Yet the implications of the respondents' answers for the validity of search unemployment theories seem clear. Since only 32 percent were on layoff, and more than 81 percent of laid-off workers reported some effort to find an interim job, only 6 percent of the unemployment could have been seasonal or cyclical in the sense used in this paper. Search unemployment due to high acceptance wages seemed less than universal: 22 percent stated willingness to accept jobs paying less than the federal minimum wage, then $2.30 per hour; another 33 percent were willing to take a wage between the minimum and $2.99; and only 22 percent reported an acceptance wage of $4.00 or more. Finally, only 10 percent of those who were unemployed four weeks or more and who had contacted at least one employer reported having refused any job offers.

[11] Killingsworth (1978) recently retold the postwar history of this old idea.

At the risk of excluding some dislocated workers from the definition,[13] the structurally unemployed may be thought of as those who have searched for jobs but found no employers willing to hire them. This simple definition maximizes the contrast between frictional unemployment and structural unemployment, while remaining consistent with neoclassical labor economics. The frictionally unemployed will join the ranks of the employed as soon as they lower their acceptance wages. But lowering their acceptance wages will not help the structurally unemployed find work;[14] they have not refused any wage offers.

There is some empirical evidence that the notion that the unemployed are refusing wage offers is especially inappropriate for young men.[15] If this is true, then empirical models of search unemployment[16] may not be appropriate for individual data on youth unemployment. Alternative models directly analogous to those used on aggregate data[17] are proposed at the end of the next subsection.

---

[12] See Demsetz (1961). But a legal minimum wage or union wage scale need not be binding constraints on employer behavior if there are other, higher, wage rigidities.

[13] Lucas (1978) seems to. We might conceivably argue that the laid-off skilled steelworker in Pittsburgh who won't sell his house and take a minimum-wage job is voluntarily unemployed, but we cannot argue as easily that an unskilled teenager who cannot get that same job is unemployed voluntarily.

[14] Indeed, in Weiss's (1980) model it is precisely the positive relationship between the acceptance wage and expected productivity that causes the unemployment of workers with low acceptance wages. Compare Lucas (1978:354): "The unemployed worker at any time can always find some job at once. . . . However miserable one's current work options, one can always choose to accept them."

[15] Stephenson (1976) analyzed 281 respondents of the 300 unemployed males aged 18-21 with 8-12 years of education who sought full-time jobs in November 1971 at the Indianapolis state employment service office. He states (on p. 110): "Nearly 90 percent of both white and black youths, when describing the search before their last job, said they took their first offer. In contrast to the search literature which usually implies a choice among several offers, the central search problem of young men may be to find a single offer." Cave (1983) exploits this insight in modeling unemployment among unskilled workers. Of course, because of its self-selection, Stephenson's sample may not be representative of all unemployed youth in Indianapolis at the time.

Implications for Empirical Work on Youth Unemployment

Young people's behavior in labor markets is even more complex than the behavior of their elders. Unlike prime-age males, young people have nonparticipation as a real option, and they exercise it often. Whether they are in or out of the labor market, they must make another constrained choice their elders rarely face--whether to stay enrolled in school. Moreover, they work part-time rather than full-time more often than older people do. Empirical studies of youth labor markets must deal in some fashion with the joint determination of school enrollment, military status, labor force participation, hours worked per week, and wages. There is important simultaneity between participation and the chance of unemployment if participation is chosen. There is also simultaneity between the number of years of education a person has and the chance he or she will find a place in the labor force.

In addition to the simultaneity problems, there are problems of definition for the labor force variables. Several very different kinds of behavior are reported as the same empirical phenomenon, "youth unemployment." For someone who has quit school permanently and who cannot rely on family financial support, reported unemployment may reflect a chronic inability to find any hours of employment at any wage level. This kind of involuntary, structural unemployment may constitute what Conant (1961) called "social dynamite," and it has grave implications for adult poverty and crime.[18] At the other end of the spectrum of interpretations of these statistics, reported unemployment in a particular week may reflect brief job search or normal experimentation with possible careers. For someone who has completed his or her education fairly recently, reported unemployment may reflect a single episode of leisurely job search or unrealistic wage expectations. Summer unemployment by those who have never left school ought to be treated as possibly the common experience of many young people. Someone who has worked long enough in the past to be eligible for state unemployment compensation may misreport actual nonparticipation as unemployment.

---

[16] Since the search literature is mainly theoretical, there are few empirical search models to criticize. Kiefer and Neumann (1979, 1981) are careful to use data on permanently laid-off men for whom their sophisticated search model seems especially appropriate.

[17] For example, Fleisher and Rhodes (1976).

[18] Recent empirical work, though not conclusive because of poor data, tends to make Conant's fears seem ill-founded. Freeman and Wise (1982) briefly survey work that, based on longitudinal data, finds no significant effect of employment history *per se* on later labor force behavior, once persistent individual skill and motivation differences have been controlled for. But Cave (1981) and Levy (1982) criticize these results as possibly reflecting unavoidable selection bias against the relatively small demographic group Conant worried about.

A further problem of definition arises because many chronically jobless youths may not show up in unemployment statistics at all. Discouraged worke[redacted]e counted among those who are not even part of the labor force in a particular week. They may have been unemployed for a long period in the recent past, they may be permanent school-leavers, and they may have low reservation wages, but unless they engage in specific search activities they are not counted as part of the unemployed labor force. In addition to being too inclusive an indicator of chronic joblessness, youth unemployment may be too exclusive.

Another important statistical problem plaguing empirical work on youth labor force behavior has sometimes been called "ecological correlation bias" (see Freeman, 1982:115).[19] Much of the empirical work on unemployment has used the Standard Metropolitan Statistical Area (SMSA), not the individual, as the unit of observation.[20] The proportion of variation in labor force behavior across areas that is generally explained by SMSA regressions is much higher than the proportion of variation across individuals that is explained by regressions using individuals. Individual regressions may attribute to individual characteristics (such as education, race, and family income) explanatory power that really belongs to area variables (such as the density of employment opportunities) that are correlated with the individual characteristics. It is surprising that few studies of individual labor force behavior have made use of area information that may be available (albeit at great cost) even in microdata.[21]

---

[19] Rosen (1984), reporting on data from a BLS cooperative federal-state statistical program, indicates that there is a great deal of variation in unemployment among local areas. In 1979, local unemployment rates ranged from 40 percent in Menominee County, Wisconsin, to less than 1 percent in Sioux County, Nebraska.

[20] Examples are Gilman (1965), Kalachek (1969), Fleisher and Rhodes (1976), and part of Freeman (1982). These SMSA regressions generally explain a much higher proportion of variation in SMSA unemployment than is explained (typically well under 10 percent) in individual regressions.

[21] Abowd and Killingsworth (1984) are an exception, although one might quibble with their choice of geographic area variables to match with individual data.

Increasing the level of aggregation by using area characteristics to eliminate a troublesome bias suggests making other analogies to labor force models for more aggregated data. By direct analogy to a recent analysis by Fleisher and Rhodes (1976) using SMSA data, a model to be estimated using microdata ought to have at least two simultaneous equations, one for an individual's probability of labor force participation and one for his probability of unemployment conditional on labor force participation. In the participation equation, a coefficient on the unemployment probability would give the discouraged-worker effect, while a coefficient on an unemployment dummy variable for other members of the household would give the added-worker effect. If a separate conditional unemployment probability equation was estimated for each labor market, using only the young labor force participants in that labor market, the ecological correlation problem might be reduced.

A Structural Model for the Youth Labor Market

An alternative and even more direct approach to these problems of modeling the youth labor market is available. An appropriate, though likely quite expensive, empirical framework might generalize recent work by Heckman (1979) in the following way.

Suppose that a microdata sample has i young people, and that each individual is revealed to live in one of j geographic areas, which may be considered separate labor markets. Let M_i, U_i, N_i, and S_i be dummy variables for individual i for unconditional employment, unemployment, nonparticipation, and school enrollment, respectively. Let j(i) be the geographic area in which individual i lives. Let $Z_{j(i)}$ be a vector of characteristics (such as the proportion of working-age people who are young and the fraction of jobs that do not require much skill) associated with area j(i). Let X_i be a vector of characteristics (such as number of years of schooling and area type within the geographic area) specific to individuals. Let w(i) be the wage for individual i.

Then consider the system of equations,

$$\begin{aligned}
\Pr(U_i{=}1;\ N_i{=}0) &\equiv P_{Ui} = P_{Ui}(X_{Ui},\ Z_{Uj(i)},\ w_i)\\
\Pr(N_i{=}0) &\equiv P_{Ni} = P_{Ni}(X_{Ni},\ w_i,\ PU_i)\\
\Pr(S_i{=}0) &\equiv P_{Si} = P_{Si}(X_{Si},\ Z_{Sj(i)},\ w_i,\ PU_i)\\
w_i &= w_i(Xw_i,\ Z_{wj(i)},.\ PU_i)
\end{aligned}$$

This system of simultaneous equations uses some of the findings in the literature on the youth labor market to impose an empirically testable structure on microdata.[22] For example, the hypothesis of

---

[22] Most likely, the best data set for this purpose is the 1976 Survey of Income and Education. It is three times as large as the monthly CPS and has more wage and geographic data revealed for individuals than does the census microdata. Abowd and Killingsworth (1984) and Freeman (1982) chose it.

Fearn (1968) that unemployment may be strongly associated with school enrollment and that wages have a weak effect could be tested directly with the third equation; the second equation would pick up any discouraged-worker effect as a negative coefficient on unemployment; and so on.

Much of the difficulty in empirical work on the youth labor market stems from fairly complex sample-selection problems, which the model presented here could capture. Wages are observed only for those who are employed; for everyone else, they must be imputed. Most important, conditional unemployment is observed only for those who participate in the labor force; a conditional probability of unemployment must be imputed to those who are out of the labor force. By straightforward extension of Heckman's work, a multivariate, normal-error structure for the four equations could accommodate this sample selection and thus capture information that might be otherwise lost. To reduce the computational complexity and cost, the last two equations could be dropped and wages ignored, which would produce a microeconometric model more like the Fleisher-Rhodes model for SMSA data.

NONSTUDENT TEENAGERS, AGED 16-19

Sample Selection and Descriptive Statistics

Table 2 shows how two groups of black male teenagers were selected from the 1980 Census 1 percent Sample C, and how two groups of white male teenagers were chosen from the 0.1 percent C subsample. Table 3 shows how four similar groups of black and white female teenagers were chosen for analysis. Of 12,090 black males aged 16-19, 340 were inmates of institutions; 54 of 6,950 whites were inmates. Of the remaining 11,750 black and 6,896 white male teens, 3.7 percent and 2.4 percent, respectively, were in the armed forces. (The 8,239 black male students and 4,856 white male students will be discussed below.) There remain 3,082 black male civilian noninmate, nonstudents, 1,805 of whom are labor force participants. In addition, 1,875 white civilian noninmate, nonstudent male teens have been selected, 1,577 of whom are labor force participants. Almost 56 percent of the black male noninmate, nonstudents are located in the Census Bureau's "South" region; little more than 6 percent live in the "West." In contrast, the white nonstudents are distributed more evenly. As in the case of the blacks, the South has the largest share of the sample population and the West has the smallest, but the shares range only between 18 and 33 percent.

Tables 4(a)-4(h) present descriptive statistics for the four black samples and the four white samples. The tables reveal some very striking gross racial differences in labor force behavior. First, 41.4 percent of the black males, but only 15.9 percent of the white males, are out of the labor force as well as out of school. Employment-population ratios are 68.6 percent for white males and 40.7 percent for black males. Among labor force participants, the white male unemployment rate is 18.5 percent, but the black male unemployment rate

TABLE 2 Sample Selection: Civilian, Nonstudent, Teenage Labor Force Participants, Males

SAMPLE SELECTION

BLACK SAMPLE:	NE	NC	SO	W	U.S.
Nonwhite Male Teens	2878	2842	7632	3466	16818
Less Other Races	(699)	(528)	(1089)	(2412)	(4728)
Black Male Teens	2179	2314	6543	1054	12090
Less Inmates of Institutions	(85)	(65)	(144)	(46)	(340)
Black Noninmate Male Teens	2094	2249	6399	1008	11750
Less Armed Forces	(26)	(38)	(273)	(92)	(429)
Black Civilian Noninmate Male Teens	2068	2211	6126	916	11321
Less Students	(1487)	(1625)	(4402)	(725)	(8239)
Black Civilian Noninmate Nonstudents, 16-19	581	586	1724	191	3082
Black Civilian Noninmate Nonstudent Labor Force, 16-19	315	348	1025	117	1805
WHITE SAMPLE:	NE	NC	SO	W	U.S.
White Male Teens					6950
Less Inmates of Institutions					(54)
White Noninmate Male Teens	1515	1995	2166	1220	6896
Less Armed Forces	(14)	(25)	(92)	(34)	(165)
White Civilian Noninmate Male Teens	1501	1970	2074	1186	6731
Less Students	(1120)	(1452)	(1446)	(838)	(4856)
White Civilian Noninmate Nonstudents, 16-19	381	518	628	348	1875
White Civilian Noninmate Nonstudent Labor Force, 16-19			508		1577

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 3 Sample Selection: Civilian, Nonstudent, Teenage Labor Force Participants, Females

SAMPLE SELECTION

BLACK SAMPLE:	NE	NC	SO	W	U.S.
Black Civilian Noninmate Female Teens	2225	2381	6387	943	11936
Less Students	(1609)	(1672)	(4539)	(685)	(8505)
Black Civilian Noninmate Nonstudents, 16-19	616	709	1848	258	3431
Black Civilian Noninmate Nonstudent Labor Force, 16-19	245	312	849	124	1530
WHITE SAMPLE:	NE	NC	SO	W	U.S.
White Civilian Noninmate Female Teens	1471	1921	2155	1197	6744
Less Students	(1088)	(1384)	(1499)	(840)	(4811)
White Civilian Noninmate Nonstudents, 16-19	383	537	656	357	1933
White Civilian Noninmate Nonstudent Labor Force, 16-19	279	383	415	232	1309

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(a) Civilian, Nonstudent Teenagers, Male Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATIO
INTERCEPT	3082.00000000	1.00000000	3082.00000000	0.00000000	0.0000000
U	551.00000000	0.17878001	551.00000000	0.14686537	0.3832301
EDUCATN	31879.00000000	10.34360805	342093.00000000	4.00815290	2.0020371
CC	1758.00000000	0.57040883	1758.00000000	0.24512213	0.4950981
HHINCOME	44331.56000000	14.38402336	1113886.40369997	154.56676696	12.4324883
FAM	100.00000000	0.03244646	100.00000000	0.03140388	0.1772114
DISABIL	138.00000000	0.04477612	138.00000000	0.04278510	0.2068456
SO	1724.00000000	0.55937703	1724.00000000	0.24655437	0.4965424
M	1254.00000000	0.40687865	1254.00000000	0.24140674	0.4913316
N	1277.00000000	0.41434134	1277.00000000	0.24274135	0.4926878
AGE	57310.50000000	18.59523037	1068486.87500000	0.90390292	0.9507380

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(b) Civilian, Nonstudent Teenagers, Male Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATIO
INTERCEPT	1875.00000000	1.00000000	1875.00000000	0.00000000	0.0000000
U	291.00000000	0.15520000	291.00000000	0.13118292	0.3621918
EDUCATN	20217.00000000	10.78240000	224341.00000000	3.39019168	1.8412473
CC	444.00000000	0.23680000	444.00000000	0.18082220	0.4252319
HHINCOME	36813.13000000	19.63366933	1119886.58539997	211.90489000	14.5569533
FAM	176.00000000	0.09386667	176.00000000	0.08510110	0.2917209
DISABIL	73.00000000	0.03893333	73.00000000	0.03743750	0.1934877
SO	628.00000000	0.33493333	628.00000000	0.22287186	0.4720930
M	1286.00000000	0.68586667	1286.00000000	0.21556855	0.4642936
N	298.00000000	0.15893333	298.00000000	0.13374486	0.3657114
AGE	35003.00000000	18.66826667	655072.00000000	0.86801594	0.9316737

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(c) Civilian, Nonstudent Teenage Labor Force Participants, Male Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	1805.00000000	1.00000000	1805.00000000	0.00000000	0.00000000
U	551.00000000	0.30526316	551.00000000	0.21219512	0.46064642
EDUCATN	19198.00000000	10.63601108	210500.00000000	3.49770470	1.87021515
CC	995.00000000	0.55124654	995.00000000	0.24751092	0.49750469
HHINCOME	27828.05500000	15.41720499	724460.64412499	163.76375600	12.79702137
FAM	76.00000000	0.04210526	76.00000000	0.04035477	0.20088496
DISABIL	50.00000000	0.02770083	50.00000000	0.02694842	0.16415975
SO	1025.00000000	0.56786704	1025.00000000	0.24553009	0.49550993
M	1254.00000000	0.69473684	1254.00000000	0.21219512	0.46064642
AGE	33896.50000000	18.77922438	637838.37500000	0.71418842	0.84509669

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(d) Civilian, Nonstudent Teenage Labor Force Participants, Male Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	1577.00000000	1.00000000	1577.00000000	0.00000000	0.00000000
U	291.00000000	0.18452758	291.00000000	0.15057264	0.38803690
EDUCATN	17251.00000000	10.93912492	193431.00000000	2.99502284	1.73061343
CC	368.00000000	0.23335447	368.00000000	0.17901368	0.42310008
HHINCOME	31297.15500000	19.84600824	960134.61272499	215.10851307	14.66657810
FAM	164.00000000	0.10399493	164.00000000	0.09323911	0.30535079
DISABIL	47.00000000	0.02980342	47.00000000	0.02893353	0.17009858
SO	508.00000000	0.32213063	508.00000000	0.21850104	0.46744095
M	1286.00000000	0.81547242	1286.00000000	0.15057264	0.38803690
AGE	29622.75000000	18.78424223	557578.93750000	0.72209766	0.84976330

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(e) Civilian, Nonstudent Teenagers, Female Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	3431.00000000	1.00000000	3431.00000000	0.00000000	0.00000000
U	493.00000000	0.14368989	493.00000000	0.12307898	0.35082613
EDUCATN	37204.00000000	10.84348586	414360.00000000	3.18919881	1.78583280
CC	1997.00000000	0.58204605	1997.00000000	0.24333937	0.49329440
HHINCOME	44911.94000000	13.09004372	1074291.85044997	141.80542051	11.90820811
FAM	402.00000000	0.11716701	402.00000000	0.10346906	0.32166606
DISABIL	145.00000000	0.04226173	145.00000000	0.04048748	0.20121500
SO	1848.00000000	0.53861848	1848.00000000	0.24858106	0.49857905
M	1037.00000000	0.30224424	1037.00000000	0.21095415	0.45929745
N	1901.00000000	0.55406587	1901.00000000	0.24714892	0.49714074
AGE	63925.75000000	18.63181288	1193974.81250000	0.85195339	0.92301321

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(f) Civilian, Nonstudent Teenagers, Female Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	1933.00000000	1.00000000	1933.00000000	0.00000000	0.00000000
U	177.00000000	0.09156751	177.00000000	0.08322596	0.28848909
EDUCATN	21399.00000000	11.07035696	242127.00000000	2.70829785	1.64569069
CC	465.00000000	0.24055872	465.00000000	0.18278478	0.42753337
HHINCOME	35195.93500000	18.20793326	1028524.49767499	200.66214390	14.16552660
FAM	596.00000000	0.30832902	596.00000000	0.21337262	0.46192274
DISABIL	59.00000000	0.03052250	59.00000000	0.02960620	0.17206451
SO	656.00000000	0.33936886	656.00000000	0.22431368	0.47361765
M	1132.00000000	0.58561821	1132.00000000	0.24279513	0.49274246
N	624.00000000	0.32281428	624.00000000	0.21871837	0.46767336
AGE	36122.25000000	18.68714434	676647.06250000	0.84128522	0.91721601

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(g) Civilian, Nonstudent Teenage Labor Force Participants, Female Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	1530.00000000	1.00000000	1530.00000000	0.00000000	0.00000000
U	493.00000000	0.32222222	493.00000000	0.21853790	0.46748037
EDUCATN	17191.00000000	11.23594771	197279.00000000	2.69576382	1.64187814
CC	834.00000000	0.54509804	834.00000000	0.24812834	0.49812483
HHINCOME	22044.63000000	14.40825490	553254.36499999	154.10707439	12.41398705
FAM	183.00000000	0.11960784	183.00000000	0.10537068	0.32460850
DISABIL	34.00000000	0.02222222	34.00000000	0.02174261	0.14745374
SO	849.00000000	0.55490196	849.00000000	0.24714731	0.49713912
M	1037.00000000	0.67777778	1037.00000000	0.21853790	0.46748037
AGE	28793.50000000	18.81928105	542851.75000000	0.64014468	0.80009042

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 4(h) Civilian, Nonstudent Teenage Labor Force Participants, Female Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	1309.00000000	1.00000000	1309.00000000	0.00000000	0.00000000
U	177.00000000	0.13521772	177.00000000	0.11702329	0.34208667
EDUCATN	14931.00000000	11.40641711	172677.00000000	1.81023402	1.34544937
CC	311.00000000	0.23758594	311.00000000	0.18127735	0.42576678
HHINCOME	25799.26500000	19.70914057	792091.21032499	216.82711771	14.72505069
FAM	281.00000000	0.21466769	281.00000000	0.16871436	0.41074853
DISABIL	27.00000000	0.02062643	27.00000000	0.02021643	0.14218448
SO	415.00000000	0.31703591	415.00000000	0.21668968	0.46549939
M	1132.00000000	0.86478228	1132.00000000	0.11702329	0.34208667
AGE	24646.25000000	18.82830405	464895.18750000	0.64839360	0.80522891

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

is 30.5 percent.[23] Among the young women, 55.4 percent of the blacks and 32.3 percent of the whites were out of the labor force as well as out of school. Among the rest of the young women, the unemployment rate was 32.2 percent for blacks and 13.5 percent for whites.

As one might expect, considering the transition from school to work that they are making, nonstudent teenagers who participate in the labor force are a bit older and have completed a bit more education than the group as a whole, regardless of race or sex. But it is surprising that 1979 household income, excluding the teenager's 1979 earnings, is greater for the labor force participants than for the group as a whole. Among the young men, the effect is much larger among black teenagers than among the white group. Among the young women, the difference between means is slightly larger for whites.

The fraction of black male nonstudents who are out of the labor force is 2.6 times the fraction of white males; this ratio is 1.7 for females. So one important question is, What accounts for the tremendous differences in labor force participation rates? In particular, what proportion of each racial group is made up of probable discouraged workers?

Labor Force Status

Without placing too restrictive a structure on the data, participation, employment, and unemployment can be expected to be related to age, region, area type, years of education completed, a marital status dummy variable (FAM), disability, and household income net of the teenager's earnings. Region may to some extent reflect the structure of wages and job availability in local economies. Area type would capture some of these same forces but, unlike region, would be highly correlated with individual and family characteristics. Since young people generally make gradual transitions from school to work, years of education completed, especially those in excess of 12, ought to increase labor force participation and employment. The greater financial responsibilities of married teenagers ought to increase their participation and make voluntary unemployment, but not involuntary unemployment, less likely for them. A disabled teenager ought to be less likely to participate in the work force and less likely to find employment when he does. Low household income ought to impel a teenager into the work force, but it might also reflect poor job opportunities for every member of the family, or serve as a proxy variable for poorer-quality schools.

---

[23] When these labor force and unemployment statistics for nonstudents are added to those reported in Table 8 for students, national unemployment rates comparable to those reported by the BLS emerge. The implied rates are 14.6 percent for white male teens and 26.9 percent for black male teens. The period census respondents were asked about overlaps with two BLS survey periods, those for March and April 1980. Unemployment rates, not seasonally adjusted, from Employment and Earnings, bracket neatly the white teenage rate in this paper. White male teenage unemployment as a percentage of the civilian noninstitutional labor force aged 16-19 was 14.1 percent for April and 14.7 percent for March. However, the analog here to the volatile "black and other" teenage unemployment rate reported by the BLS is not as close; those BLS rates were 27.7 percent for April and 32.3 percent for March.

Exploratory regressions were run using these and other variables to explain unconditional and conditional labor force status in subsamples of young men of the same race. Repeated attempts to use three regional dummies (for North Central, West, and South) and three area type dummies (for rural, urban outside urban area, and central city) generally were unsuccessful for participation, employment, and unemployment equations in all subsamples. Only the dummy variables for central city area and for the South region consistently were significant; often, the South coefficient was large and extraordinarily significant. Thus, in the linear and logistic regressions reported here, central city and South are the only geographic dummy variables used. Intercepts pick up, along with other unidentified effects, the unidentified contributions of living outside the South and outside the central city.

Gross Effect of Race on Unemployment

In Tables 5(a)-5(d), linear probability models of multiple choice are used to show quite clearly the gross racial differentials in the labor force behavior of young people. The table has four parts. In parts (a) and (b), all young men aged 16-19 who were not enrolled in school are included. In parts (b) and (d), only nonenrolled labor force participants are included. In each model, the intercept is simply the value for whites, while the coefficient on color gives the racial difference. For example, in "MODEL03" of part (a), just as in Table 4(b), precisely 15.8933 percent of male white teenagers are seen to be out of the labor force. The figure for blacks is 25.6908 percent higher, for a total black male percentage of 41.584. This figure is slightly different from the 41.4341 percent given in Table 4(a) because there are only one-tenth as many blacks as before. Because unemployment, employment, and nonparticipation partition the sample in (a), the intercepts in the first three equations must sum to unity and the coefficients must sum to zero.[24]

---

[24] Pindyck and Rubinfeld (1981:301-303) provide the trivial and tedious details. In essence, even when X and Y are dummy variables, LPM coefficient estimates are computed using the usual OLS formula, b = (X'X)-1X'Y. The first factor, the inverted cross-product matrix, contains totals of individuals of each race to be used as the denominators of the coefficient estimates. The second factor has the counts of labor force status by race to be used as numerators.

TABLE 5(a) Linear Probability Models: Civilian, Nonstudent Male Teenagers

```
MODEL:    MODEL01                  SSE  290.853302     F RATIO           1.35
                                   DFE        2176     PROB>F          0.2451
DEP VAR: U                         MSE    0.133664     R-SQUARE        0.0006

VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.155200 0.008443197     18.3817         0.0001
COLOR                 1       0.026318    0.022637      1.1626         0.2451

MODEL:    MODEL02                  SSE  476.853354     F RATIO          95.48
                                   DFE        2176     PROB>F          0.0001
DEP VAR: M                         MSE    0.219142     R-SQUARE        0.0420

VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.685867    0.010811     63.4421         0.0001
COLOR                 1      -0.283226    0.028985     -9.7716         0.0001

MODEL:    MODEL03                  SSE  324.241827     F RATIO         115.54
                                   DFE        2176     PROB>F          0.0001
DEP VAR: N                         MSE    0.149008     R-SQUARE        0.0504

VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.158933 0.008914653     17.8283         0.0001
COLOR                 1       0.256908    0.023901     10.7489         0.0001
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 5(b) Linear Probability Models: Civilian, Nonstudent Labor Force Participants, Male Teenagers

```
MODEL:    MODEL21                  SSE  275.212078     F RATIO          16.14
                                   DFE        1752     PROB>F          0.0001
DEP VAR: U                         MSE    0.157085     R-SQUARE        0.0091

                              PARAMETER    STANDARD
VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.184528 0.009980467     18.4889         0.0001
COLOR                 1       0.126207    0.031418      4.0170         0.0001
-----------------------------------------------------------------------------

MODEL:    MODEL22                  SSE  275.212078     F RATIO          16.14
                                   DFE        1752     PROB>F          0.0001
DEP VAR: M                         MSE    0.157085     R-SQUARE        0.0091

                              PARAMETER    STANDARD
VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.815472 0.009980467     81.7068         0.0001
COLOR                 1      -0.126207    0.031418     -4.0170         0.0001
-----------------------------------------------------------------------------

MODEL:    MODEL31                  SSE  269.970506     F RATIO          16.80
                                   DFE        1750     PROB>F          0.0001
DEP VAR: U                         MSE    0.154269     R-SQUARE        0.0280

                              PARAMETER    STANDARD
VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.209542    0.012013     17.4430         0.0001
SO                    1      -0.077652    0.021166     -3.6687         0.0003
COLOR                 1       0.262681    0.047822      5.4929         0.0001
INTRACT               1      -0.194570    0.063717     -3.0537         0.0023
-----------------------------------------------------------------------------

MODEL:    MODEL32                  SSE  269.970506     F RATIO          16.80
                                   DFE        1750     PROB>F          0.0001
DEP VAR: M                         MSE    0.154269     R-SQUARE        0.0280

                              PARAMETER    STANDARD
VARIABLE             DF       ESTIMATE       ERROR     T RATIO       PROB>|T|
INTERCEPT             1       0.790458    0.012013     65.8004         0.0001
SO                    1       0.077652    0.021166      3.6687         0.0003
COLOR                 1      -0.262681    0.047822     -5.4929         0.0001
INTRACT               1       0.194570    0.063717      3.0537         0.0023
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 5(c) Linear Probability Models: Civilian, Nonstudent Female Teenagers

```
MODEL:    MODEL01                  SSE   196.948170        F RATIO          2.41
                                   DFE         2278        PROB>F         0.1210
DEP VAR: U                         MSE     0.086457        R-SQUARE       0.0011

VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.091568  0.006687799         13.6917        0.0001
COLOR              1      0.026588     0.017143          1.5510        0.1210

MODEL:    MODEL02                  SSE   538.071541        F RATIO        121.12
                                   DFE         2278        PROB>F         0.0001
DEP VAR: M                         MSE     0.236203        R-SQUARE       0.0505

VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.585618     0.011054         52.9770        0.0001
COLOR              1     -0.311843     0.028335        -11.0054        0.0001

MODEL:    MODEL03                  SSE   505.261297        F RATIO        107.93
                                   DFE         2278        PROB>F         0.0001
DEP VAR: N                         MSE     0.221800        R-SQUARE       0.0452

VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.322814     0.010712         30.1361        0.0001
COLOR              1      0.285255     0.027458         10.3888        0.0001
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 5(d) Linear Probability Models: Civilian, Nonstudent Labor Force Participants, Female Teenagers

```
MODEL:    MODEL21                  SSE   181.706169        F RATIO         27.04
                                   DFE         1443        PROB>F         0.0001
DEP VAR: U                         MSE     0.125923        R-SQUARE       0.0184

                         PARAMETER     STANDARD
VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.135218  0.009808031         13.7864        0.0001
COLOR              1      0.166253     0.031970          5.2002        0.0001
------------------------------------------------------------------------------

MODEL:    MODEL22                  SSE   181.706169        F RATIO         27.04
                                   DFE         1443        PROB>F         0.0001
DEP VAR: M                         MSE     0.125923        R-SQUARE       0.0184

                         PARAMETER     STANDARD
VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.864782  0.009808031         88.1708        0.0001
COLOR              1     -0.166253     0.031970         -5.2002        0.0001
------------------------------------------------------------------------------

MODEL:    MODEL31                  SSE   181.559482        F RATIO          9.40
                                   DFE         1441        PROB>F         0.0001
DEP VAR: U                         MSE     0.125995        R-SQUARE       0.0192

                         PARAMETER     STANDARD
VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.135347     0.011872         11.4009        0.0001
SO                 1 -0.000406997     0.021084         -0.0193        0.9846
COLOR              1      0.203636     0.047712          4.2680        0.0001
INTRACT            1     -0.065849     0.064934         -1.0141        0.3107
------------------------------------------------------------------------------

MODEL:    MODEL32                  SSE   181.559482        F RATIO          9.40
                                   DFE         1441        PROB>F         0.0001
DEP VAR: M                         MSE     0.125995        R-SQUARE       0.0192

                         PARAMETER     STANDARD
VARIABLE          DF      ESTIMATE        ERROR         T RATIO      PROB>|T|
INTERCEPT          1      0.864653     0.011872         72.8338        0.0001
SO                 1  0.0004069971     0.021084          0.0193        0.9846
COLOR              1     -0.203636     0.047712         -4.2680        0.0001
INTRACT            1      0.065849     0.064934          1.0141        0.3107
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

What should we use as our measure of youth unemployment? Should we use the unconditional ratio of the number of unemployed to the size of the cohort displayed in parts (a) and (c) of Table 5, or should we use from parts (b) and (d) the rate of unemployment conditional on participation in the labor force? If we choose the first option, we need go no further in our analysis of youth unemployment. For both young men and young women, "MODEL01" shows that the race differential is small and insignificantly different from zero.[25] In that case, our emphasis must be on the lower labor force participation rates and lower employment-to-population ratios of blacks.[26]

Clearly, we must focus attention on conditional measures of unemployment if we are to say anything sensible about racial differences in youth unemployment. The much lower labor force participation of blacks and their higher unemployment rates tend to cancel out each other completely in unconditional measures of unemployment. But "MODEL21" in Table 5(b) shows that the gross male racial differential is 12.6 percent and significant[27] when we use a conditional measure of unemployment. Since 12.6 percent is less than the 18.5 percent unemployment rate for whites, however, among nonstudent male teenagers the widely believed, roughly two-to-one ratio of black unemployment to white unemployment was too pessimistic by one-third on census day in 1980; it was only 1.68.

What happens to the gross differential when we correct for region? "MODEL31," Table 5(b), tells us that the ratio of black to white male youth unemployment rates was 2.25 outside the South but only 1.52 in the South.[28] The corresponding ratios for women are 2.5 and 2.0,

---

[25] The asymptotic t-statistic for a logit version of "MODEL01" is only 1.16; the LPM does not lead us astray here.

[26] Freeman (1982:116) gives as one of four "basic findings" the following: "Because determinants of youth unemployment often have the same directional impact on labor force participation rates as on employment, [they] have little effect, or occasionally a contradictory effect, on unemployment rates. This suggests that analyses focusing on unemployment can give misleading impressions about the determinants of the youth labor market position." Indeed, the advance title of the conference at which Freeman presented his important paper was not "The Youth Labor Market Problem," but rather "Youth Unemployment." The approach here permits a more direct attack.

[27] The asymptotic t-statistic from the logistic regression, 3.94, confirms the LPM result.

[28] The LPM framework gives unemployment rates for white Southerners, black non-Southerners, and black Southerners as sums of the coefficients. For example, the rate for black Southerners is the sum of all four coefficients.

Table 5(d). These differences reflect larger regional differentials in unemployment rates for blacks than for whites, especially among young men. The unemployment rate for southern black males was only 42 percent of the rate for nonsouthern black males, while the geographic ratio of unemployment rates for white males was much higher, at almost 63 percent. From Table 4(a), we know that an astounding 56.8 percent of the black male, nonstudent labor force participants live in the South. Were this not so, the national ratio of male unemployment rates by race would be much higher than 1.68.

Gross Effect of Race on Other Labor Force Status Variables

Table 5 shows that what was said before about the linear probability model was correct; in any set of LPM regressions of dependent variables that partition the sample, the intercept coefficients must sum to unity and the slopes to zero. When, as in part (b), just two labor market states partition the sample, one of the two LPM regressions is redundant. In "MODEL22," the intercept is the difference between unity and the intercept in "MODEL21." This simply means that the rate of white employment, conditional on labor force participation, is one minus the white unemployment rate. The slope restriction simply ensures that the racial difference in conditional employment rates has the same absolute value as the racial difference in unemployment rates.

In parts (a) and (c) of the table, the race coefficients for unconditional employment and nonparticipation show how the unconditional unemployment ratios came to be nil. Among males, a 28.3 percent gross racial differential in employment-to-population ratios is offset almost exactly by a 25.7 percent racial differential in labor force participation. Among females, a 31.2 percent gross racial differential in employment-population ratios is offset by a 28.5 percent racial differential in labor force participation.

Structural Interpretation

There are two strikingly different structural interpretations for the racial differential in labor force participation. Freeman (1982) and others have found little difference between the wages of employed black and white young people.[29] Heckman (1974), implementing neoclassical labor force participation theory empirically, shows how a woman observed outside the labor force can be modeled as having an imputed market wage below her personal reservation wage. If Heckman's model is applied to the youth labor market, ignoring unemployment, then an explanation for lower black participation is higher black reservation wages. On the other hand, if the analogy to macroeconomic models posited above is maintained, the lower black participation is a discouraged-worker effect consistent with the higher black unemployment rate.

---

[29] Freeman (1982:142) reports S1E log hourly earnings regressions showing only a 3 percent disadvantage for blacks aged 18-19 and blacks aged 20-24. For 16-17 year olds, he reports an actual wage advantage of 17 percent for blacks.

The Effect of Additional Explanatory Variables

For the reasons stated above, it might be unwise to place much faith in structural estimates of the effect of race on unemployment based on single-equation techniques, or even on system techniques, ignoring the complex sample selection used to generate data on youth unemployment, wages, and school enrollment. Thus far, the focus has been on merely measuring gross effects of race on unemployment. The estimates presented in this section should be considered much more tentative, because of the many sources of bias that have not been corrected here.

Tables 6(a)-6(d) present estimates of conditional unemployment probabilities for nonstudents. In parts (a) and (c) of the table, the use of age as a regressor reduces the strong impact of years of education that is present in parts (b) and (d); in fact, age replaces education as the greatest reducer of chi-square. Southern location keeps the strong negative effect on the chance of male unemployment that it had in the LPM. The failure of household income to explain much variation in male unemployment is surprising if unemployment is voluntary search; perhaps replacing household income with a dummy variable for unemployment of the head of the household would produce a stronger effect. Race has the largest effect of all the dummy variables and still seems to have a strong impact on unemployment.

In parts (a) and (c) of Table 7, there is still no significant racial difference in unemployment ratios even after adjustment for other individual characteristics. Parts (b) and (d) of the table show how race affects nonparticipation when no discouraged-worker effects have been permitted to occur in the equation. Comparison of parts (b) and (d) of Table 7 shows how remarkably the effect of marital status (FAM) differs by sex. There is no independent effect of southern location on young women's participation, even though the effect is strong for young men.

STUDENT TEENAGERS, AGED 16-19

Sample Selection and Descriptive Statistics

Parts (a) through (d) of Table 8 contain descriptive statistics for 4,856 white male students from the 0.1 percent C subsample and for 8,239 black male students from the full 1 percent sample. Parts (e) through (h) give the same statistics for 4,811 white and 8,505 black female students. These statistics contrast sharply with those in Table 4(a)-4(h) for nonstudents. A very high proportion of all groups was

TABLE 6(a) Conditional Unemployment Probabilities Using Age as a Regressor, Civilian, Nonstudent Labor Force Participants, Male Teenagers

```
                         LOGISTIC REGRESSION PROCEDURE
                            DEPENDENT VARIABLE: U


                 1754 OBSERVATIONS
                  346 POSITIVES
                 1408 NEGATIVES
                    0 OBSERVATIONS DELETED DUE TO MISSING VALUES


     -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1742.02

      CONVERGENCE OBTAINED IN  5 ITERATIONS.                   D=0.053.
      MAX ABSOLUTE DERIVATIVE=0.2112D-02.              -2 LOG L= 1644.62.
      MODEL CHI-SQUARE=   97.40 WITH  10 D.F.                 P=0.0    .


VARIABLE          BETA           STD. ERROR        CHI-SQUARE     P        D

INTERCEPT    5.42764696       1.28248823           17.91    0.0000
EDUCATN     -0.12686428       0.03384796           14.05    0.0002    0.008
AGE         -0.29201459       0.07284783           16.07    0.0001    0.009
HHINCOME     0.00169628       0.00447408            0.14    0.7046    0.000
FAM         -0.29255623       0.24509834            1.42    0.2326    0.001
DISABIL      0.46270604       0.32592203            2.02    0.1557    0.001
SO          -0.59775813       0.15481244           14.91    0.0001    0.008
CC           0.25130318       0.15277040            2.71    0.1000    0.002
SOXCOL      -0.64729610       0.39780103            2.65    0.1037    0.002
CCXCOL       0.19118747       0.39773426            0.23    0.6307    0.000
COLOR        0.95430253       0.36112488            6.98    0.0082    0.004
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 6(b) Conditional Unemployment Probabilities, Civilian, Nonstudent Labor Force Participants, Male Teenagers

```
                         LOGISTIC REGRESSION PROCEDURE
                            DEPENDENT VARIABLE: U


                 1754 OBSERVATIONS
                  346 POSITIVES
                 1408 NEGATIVES
                    0 OBSERVATIONS DELETED DUE TO MISSING VALUES


     -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1742.02

      CONVERGENCE OBTAINED IN  5 ITERATIONS.                   D=0.045.
      MAX ABSOLUTE DERIVATIVE=0.9685D-03.              -2 LOG L= 1660.44.
      MODEL CHI-SQUARE=   81.58 WITH   9 D.F.                 P=0.0    .


VARIABLE          BETA           STD. ERROR        CHI-SQUARE     P        D

INTERCEPT    0.46768080       0.35990954            1.69    0.1938
EDUCATN     -0.17088188       0.03185640           28.77    0.0000    0.016
HHINCOME     0.00124161       0.00443305            0.08    0.7794    0.000
FAM         -0.38980929       0.24356476            2.56    0.1095    0.001
DISABIL      0.44866365       0.32483203            1.91    0.1672    0.001
SO          -0.58287631       0.15401052           14.32    0.0002    0.008
CC           0.21087438       0.15172489            1.93    0.1646    0.001
SOXCOL      -0.64609606       0.39641010            2.66    0.1031    0.002
CCXCOL       0.15225014       0.39609317            0.15    0.7007    0.000
COLOR        0.94986882       0.35936788            6.99    0.0082    0.004
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 6(c) Conditional Unemployment Probabilities Using Age and Education as a Regressor, Civilian, Nonstudent Labor Force Participants, Female Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                       DEPENDENT VARIABLE: U


        1445 OBSERVATIONS
        1227  U        = 0
         218  U        = 1
           0 OBSERVATIONS DELETED DUE TO MISSING VALUES


   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1225.96

  MODEL CHI-SQUARE=    82.93 WITH  10 D.F.   (SCORE STAT.) P=0.0    .
  CONVERGENCE OBTAINED IN  5 ITERATIONS.                   R= 0.209.
  MAX ABSOLUTE DERIVATIVE=0.5369D-06.             -2 LOG L= 1152.29.
  MODEL CHI-SQUARE=    73.66 WITH  10 D.F.   (-2 LOG L.R.) P=0.0    .


VARIABLE          BETA          STD. ERROR       CHI-SQUARE     P        R

INTERCEPT    6.69912234       1.57608915           18.07    0.0000
EDUCATN     -0.17411742       0.05434578           10.26    0.0014   -0.082
AGE         -0.33559105       0.09334111           12.93    0.0003   -0.094
HHINCOME    -0.01201040       0.00595276            4.07    0.0436   -0.041
FAM         -0.22592831       0.20554140            1.21    0.2717    0.000
DISABIL      0.62566258       0.40597028            2.38    0.1233    0.017
SO          -0.07155320       0.18027037            0.16    0.6914    0.000
CC          -0.18357430       0.19867950            0.85    0.3555    0.000
SOXCOL      -0.23789505       0.44137867            0.29    0.5899    0.000
CCXCOL       0.41980877       0.45426632            0.85    0.3554    0.000
COLOR        0.90828910       0.42853113            4.49    0.0340    0.045
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 6(d) Conditional Unemployment Probabilities, Civilian, Nonstudent Labor Force Participants, Female Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                       DEPENDENT VARIABLE: U


        1445 OBSERVATIONS
        1227  U        = 0
         218  U        = 1
           0 OBSERVATIONS DELETED DUE TO MISSING VALUES


   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1225.96

  MODEL CHI-SQUARE=    70.27 WITH   9 D.F.   (SCORE STAT.) P=0.0    .
  CONVERGENCE OBTAINED IN  5 ITERATIONS.                   R= 0.187.
  MAX ABSOLUTE DERIVATIVE=0.2327D-06.             -2 LOG L= 1165.10.
  MODEL CHI-SQUARE=    60.86 WITH   9 D.F.   (-2 LOG L.R.) P=0.0    .


VARIABLE          BETA          STD. ERROR       CHI-SQUARE     P        R

INTERCEPT    1.36485040       0.56915190            5.75    0.0165
EDUCATN     -0.25780649       0.04916801           27.49    0.0000   -0.144
HHINCOME    -0.01170492       0.00589019            3.95    0.0469   -0.040
FAM         -0.27235321       0.20377561            1.79    0.1814    0.000
DISABIL      0.62538138       0.40353722            2.40    0.1212    0.018
SO          -0.06252239       0.17911250            0.12    0.7270    0.000
CC          -0.19235087       0.19765778            0.95    0.3305    0.000
SOXCOL      -0.27959955       0.43968613            0.40    0.5248    0.000
CCXCOL       0.39196512       0.45261366            0.75    0.3865    0.000
COLOR        0.91665873       0.42721497            4.60    0.0319    0.046
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 7(a) Unconditional Unemployment Probabilities Using Age as a Regressor, Civilian, Nonstudent Male Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                       DEPENDENT VARIABLE: U


          2178 OBSERVATIONS
           346 POSITIVES
          1832 NEGATIVES
             0 OBSERVATIONS DELETED DUE TO MISSING VALUES


   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1906.96

  CONVERGENCE OBTAINED IN  6 ITERATIONS.                   D=0.019.
  MAX ABSOLUTE DERIVATIVE=0.1942D-07.             -2 LOG L= 1864.66.
  MODEL CHI-SQUARE=   42.29 WITH  10 D.F.                 P=0.0000.


VARIABLE        BETA          STD. ERROR      CHI-SQUARE    P        D

INTERCEPT    0.43564000      1.16266490          0.14   0.7079
EDUCATN     -0.09511908      0.03154844          9.09   0.0026   0.004
AGE         -0.05546068      0.06679326          0.69   0.4064   0.000
HHINCOME     0.00338062      0.00423961          0.64   0.4252   0.000
FAM         -0.15806311      0.24129147          0.43   0.5124   0.000
DISABIL      0.05311048      0.29838801          0.03   0.8587   0.000
SO          -0.62447856      0.15057693         17.20   0.0000   0.008
CC           0.17428858      0.14758136          1.39   0.2376   0.001
SOXCOL      -0.22117611      0.36407431          0.37   0.5435   0.000
CCXCOL      -0.19581342      0.36304163          0.29   0.5896   0.000
COLOR        0.40942448      0.32828724          1.56   0.2123   0.001
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 7(b) Labor Force Participation Probabilities, Civilian, Nonstudent Male Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                       DEPENDENT VARIABLE: N


          2178 OBSERVATIONS
           424 POSITIVES
          1754 NEGATIVES
             0 OBSERVATIONS DELETED DUE TO MISSING VALUES


   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 2147.20

  CONVERGENCE OBTAINED IN  6 ITERATIONS.                   D=0.122.
  MAX ABSOLUTE DERIVATIVE=0.1532D-04.             -2 LOG L= 1845.10.
  MODEL CHI-SQUARE=  302.10 WITH  10 D.F.                 P=0.0    .


VARIABLE        BETA          STD. ERROR      CHI-SQUARE    P        D

INTERCEPT   10.66536953      1.08712728         96.25    .
EDUCATN     -0.07836863      0.03144011          6.21   0.0127   0.003
AGE         -0.62317655      0.06384602         95.27    .       0.042
HHINCOME    -0.00667815      0.00448927          2.21   0.1369   0.001
FAM         -0.92074141      0.30599906          9.05   0.0026   0.004
DISABIL      0.92544267      0.25494550         13.18   0.0003   0.006
SO           0.28386695      0.13819125          4.22   0.0400   0.002
CC           0.14608299      0.15444070          0.89   0.3442   0.000
SOXCOL      -0.62563728      0.30290435          4.27   0.0389   0.002
CCXCOL       0.46067254      0.31294010          2.17   0.1410   0.001
COLOR        1.25767966      0.29242890         18.50   0.0000   0.008
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 7(c) Unconditional Unemployment Probabilities Using Age as a Regressor, Civilian, Nonstudent Female Teenagers

```
                       LOGISTIC REGRESSION PROCEDURE
                          DEPENDENT VARIABLE: U

           2280 OBSERVATIONS
           2062  U        = 0
            218  U        = 1
              0 OBSERVATIONS DELETED DUE TO MISSING VALUES

     -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1437.94

    MODEL CHI-SQUARE=   21.24 WITH  10 D.F.   (SCORE STAT.) P=0.0195.
    CONVERGENCE OBTAINED IN  5 ITERATIONS.                  R= 0.037.
    MAX ABSOLUTE DERIVATIVE=0.3232D-07.             -2 LOG L= 1415.93.
    MODEL CHI-SQUARE=   22.01 WITH  10 D.F.   (-2 LOG L.R.) P=0.0150.

VARIABLE          BETA          STD. ERROR      CHI-SQUARE      P        R

INTERCEPT    0.73630620       1.39571223          0.28    0.5978
EDUCATN     -0.01062479       0.04807882          0.05    0.8251    0.000
AGE         -0.13802017       0.08384371          2.71    0.0997   -0.022
HHINCOME    -0.00702891       0.00558243          1.59    0.2080    0.000
FAM         -0.66409315       0.19371289         11.75    0.0006   -0.082
DISABIL      0.25378135       0.35259030          0.52    0.4717    0.000
SO          -0.06763013       0.17256885          0.15    0.6951    0.000
CC          -0.13627472       0.18998197          0.51    0.4732    0.000
SOXCOL       0.06433473       0.39554228          0.03    0.8708    0.000
CCXCOL       0.11657359       0.41129213          0.08    0.7768    0.000
COLOR        0.07286950       0.38902035          0.04    0.8514    0.000
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 7(d) Labor Force Participation Probabilities, Civilian, Nonstudent Female Teenagers

```
                       LOGISTIC REGRESSION PROCEDURE
                          DEPENDENT VARIABLE: N

           2280 OBSERVATIONS
           1445  N        = 0
            835  N        = 1
              0 OBSERVATIONS DELETED DUE TO MISSING VALUES

     -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 2995.54

    MODEL CHI-SQUARE=  461.55 WITH  10 D.F.   (SCORE STAT.) P=0.0    .
    CONVERGENCE OBTAINED IN  6 ITERATIONS.                  R= 0.395.
    MAX ABSOLUTE DERIVATIVE=0.1291D-11.             -2 LOG L= 2507.26.
    MODEL CHI-SQUARE=  488.29 WITH  10 D.F.   (-2 LOG L.R.) P=0.0    .

VARIABLE          BETA          STD. ERROR      CHI-SQUARE      P        R

INTERCEPT    8.82746514       0.99818280         78.21     .
EDUCATN     -0.27468560       0.03455440         63.19    0.0000   -0.143
AGE         -0.36753557       0.05900645         38.80    0.0000   -0.111
HHINCOME    -0.01075921       0.00397012          7.34    0.0067   -0.042
FAM          1.27876118       0.11323533        127.53     .        0.205
DISABIL      0.58214365       0.26508005          4.82    0.0281    0.031
SO          -0.01060688       0.11394206          0.01    0.9258    0.000
CC           0.02361572       0.12537707          0.04    0.8506    0.000
SOXCOL      -0.27130198       0.27439692          0.98    0.3228    0.000
CCXCOL       0.25352076       0.28274332          0.80    0.3699    0.000
COLOR        1.43670015       0.27092794         28.12    0.0000    0.093
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 8(a) Descriptive Statistics: Civilian, Student Teenagers, Male Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	8239.00000000	1.00000000	8239.00000000	0.00000000	0.00000000
U	505.00000000	0.06129385	505.00000000	0.05754390	0.23988309
EDUCATN	83414.00000000	10.12428693	860734.00000000	1.96974146	1.40347478
CC	4550.00000000	0.55225149	4550.00000000	0.24729980	0.49729247
HHINCOME	134414.42999997	16.31441073	3691636.31134933	181.93057688	13.48816433
FAM	56.00000000	0.00679694	56.00000000	0.00675156	0.08216789
DISABIL	240.00000000	0.02912975	240.00000000	0.02828464	0.16818038
SO	4402.00000000	0.53428814	4402.00000000	0.24885453	0.49885321
M	1618.00000000	0.19638306	1618.00000000	0.15783591	0.39728568
N	6116.00000000	0.74232310	6116.00000000	0.19130274	0.43738168
AGE	144128.50000000	17.49344581	2530528.87500000	1.11978284	1.05819792

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 8(b) Descriptive Statistics: Civilian, Student Teenagers, Male Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	4856.00000000	1.00000000	4856.00000000	0.00000000	0.00000000
U	250.00000000	0.05148270	250.00000000	0.04884229	0.22100292
EDUCATN	50926.00000000	10.48723229	543106.00000000	1.86059905	1.36403778
CC	1094.00000000	0.22528830	1094.00000000	0.17456943	0.41781507
HHINCOME	124485.02999998	25.63530272	4649686.07654958	300.40672474	17.33224523
FAM	29.00000000	0.00597199	29.00000000	0.00593755	0.07705551
DISABIL	114.00000000	0.02347611	114.00000000	0.02292971	0.15142558
SO	1446.00000000	0.29777595	1446.00000000	0.20914850	0.45732757
M	1875.00000000	0.38612026	1875.00000000	0.23708023	0.48690885
N	2731.00000000	0.56239703	2731.00000000	0.24615730	0.49614242
AGE	85342.25000000	17.57459843	1505663.43750000	1.19622332	1.09371995

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 8(c) Descriptive Statistics: Civilian, Student Teenage Labor Force Participants, Male Blacks

```
                                                  DESCRIPTIVE STATISTICS

                        SUM                MEAN         UNCORRECTED SS              VARIANCE          STD DEVIATION
INTERCEPT       2123.00000000          1.00000000         2123.00000000            0.00000000             0.00000000
U                505.00000000          0.23787094          505.00000000            0.18137379             0.42588002
EDUCATN        22229.00000000         10.47056053       236479.00000000            1.75726203             1.32561760
CC              1202.00000000          0.56617993         1202.00000000            0.24573597             0.49571763
HHINCOME       37596.71500000         17.70923928      1072960.63822498          191.87154382            13.85177042
FAM               21.00000000          0.00989166           21.00000000            0.00979843             0.09898704
DISABIL           50.00000000          0.02355158           50.00000000            0.02300774             0.15168302
SO              1151.00000000          0.54215732         1151.00000000            0.24833974             0.49833697
M               1618.00000000          0.76212906         1618.00000000            0.18137379             0.42588002
AGE            37780.75000000         17.79592558       674709.68750000            1.11511416             1.05598966
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 8(d) Descriptive Statistics: Civilian, Student Teenage Labor Force Participants, Male Whites

```
                                                  DESCRIPTIVE STATISTICS

                        SUM                MEAN         UNCORRECTED SS              VARIANCE          STD DEVIATION
INTERCEPT       2125.00000000          1.00000000         2125.00000000            0.00000000             0.00000000
U                250.00000000          0.11764706          250.00000000            0.10385510             0.32226558
EDUCATN        22759.00000000         10.71011765       247169.00000000            1.60896067             1.26844814
CC               473.00000000          0.22258824          473.00000000            0.17312418             0.41608194
HHINCOME       57024.83500000         26.83521647      2130366.00047487          282.52928863            16.80860758
FAM               13.00000000          0.00611765           13.00000000            0.00608308             0.07799413
DISABIL           31.00000000          0.01458824           31.00000000            0.01438219             0.11992576
SO               599.00000000          0.28188235          599.00000000            0.20252000             0.45002222
M               1875.00000000          0.88235294         1875.00000000            0.10385510             0.32226558
AGE            37710.00000000         17.74588235       671517.62500000            1.09246774             1.04521181
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 8(e) Descriptive Statistics: Civilian, Student Teenagers, Female Blacks

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	8505.00000000	1.00000000	8505.00000000	0.00000000	0.00000000
U	489.00000000	0.05749559	489.00000000	0.05419622	0.23280082
EDUCATN	88517.00000000	10.40764256	938757.00000000	2.05829060	1.43467439
CC	4763.00000000	0.56002352	4763.00000000	0.24642615	0.49641329
HHINCOME	135950.62499997	15.98478836	3707397.19922430	180.41571393	13.43189167
FAM	159.00000000	0.01869489	159.00000000	0.01834754	0.13545311
DISABIL	199.00000000	0.02339800	199.00000000	0.02285322	0.15117282
SO	4539.00000000	0.53368607	4539.00000000	0.24889451	0.49889329
M	1576.00000000	0.18530276	1576.00000000	0.15098340	0.38856583
N	6440.00000000	0.75720165	6440.00000000	0.18386893	0.42879941
AGE	149172.25000000	17.53935920	2626379.93750000	1.17524248	1.08408601

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 8(f) Descriptive Statistics: Civilian, Student Teenagers, Female Whites

DESCRIPTIVE STATISTICS

	SUM	MEAN	UNCORRECTED SS	VARIANCE	STD DEVIATION
INTERCEPT	4811.00000000	1.00000000	4811.00000000	0.00000000	0.00000000
U	176.00000000	0.03658283	176.00000000	0.03525185	0.18775477
EDUCATN	51307.00000000	10.66451881	555441.00000000	1.72069301	1.31175188
CC	1146.00000000	0.23820412	1146.00000000	0.18150064	0.42602892
HHINCOME	118403.08999998	24.61091041	4450447.50634959	319.42612592	17.87249635
FAM	108.00000000	0.02244856	108.00000000	0.02194918	0.14815256
DISABIL	82.00000000	0.01704427	82.00000000	0.01675725	0.12944979
SO	1499.00000000	0.31157763	1499.00000000	0.21454161	0.46318636
M	1837.00000000	0.38183330	1837.00000000	0.23608570	0.48588651
N	2798.00000000	0.58158387	2798.00000000	0.24339466	0.49335045
AGE	84606.25000000	17.58600083	1493624.81250000	1.19318704	1.09233101

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 8(g) Descriptive Statistics: Civilian, Student Teenage Labor Force Participants, Female Blacks

```
                                          DESCRIPTIVE STATISTICS

                       SUM                MEAN         UNCORRECTED SS            VARIANCE       STD DEVIATION
INTERCEPT      2065.00000000          1.00000000      2065.00000000          0.00000000          0.00000000
U               489.00000000          0.23680387       489.00000000          0.18081536          0.42522390
EDUCATN       22530.00000000         10.91041162    249528.00000000          1.80059406          1.34186216
CC             1171.00000000          0.56707022      1171.00000000          0.24562053          0.49560118
HHINCOME      35891.68500000         17.38096126   1033909.62612499        198.68102695         14.09542575
FAM              51.00000000          0.02469734        51.00000000          0.02409905          0.15523868
DISABIL          45.00000000          0.02179177        45.00000000          0.02132721          0.14603840
SO             1075.00000000          0.52058111      1075.00000000          0.24969734          0.49969724
M              1576.00000000          0.76319613      1576.00000000          0.18081536          0.42522390
AGE           36985.25000000         17.91053269    664783.06250000          1.14221580          1.06874497
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 8(h) Descriptive Statistics: Civilian, Student Teenage Labor Force Participants, Female Whites

```
                                          DESCRIPTIVE STATISTICS

                       SUM                MEAN         UNCORRECTED SS            VARIANCE       STD DEVIATION
INTERCEPT      2013.00000000          1.00000000      2013.00000000          0.00000000          0.00000000
U               176.00000000          0.08743169       176.00000000          0.07982705          0.28253681
EDUCATN       22007.00000000         10.93243915    243471.00000000          1.43181497          1.19658471
CC              504.00000000          0.25037258       504.00000000          0.18777943          0.43333524
HHINCOME      51614.94500000         25.64080725   1935473.51627489        304.18720684         17.44096347
FAM              40.00000000          0.01987084        40.00000000          0.01948567          0.13959108
DISABIL          29.00000000          0.01440636        29.00000000          0.01420587          0.11918839
SO              577.00000000          0.28663686       577.00000000          0.20457780          0.45230277
M              1837.00000000          0.91256831      1837.00000000          0.07982705          0.28253681
AGE           35824.75000000         17.79669647    639736.18750000          1.08050971          1.03947569
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

out of the labor force, as one might expect for students at the middle of the spring term in 1980--56.2 percent of all white male students and 74.2 percent of the black male students did not participate in the labor force. The black-white ratio is only 1.32, just half the ratio of participation rates for black and white nonstudents reported in the last section. Employment-to-population ratios, however, are worse for black students relative to white students than they were for black nonstudents relative to white nonstudents. The fraction of all white male students who had jobs was 38.6 percent; this was 1.97 times the fraction of all black male students who had jobs. The ratio for male nonstudents was only 1.67. The employment-population ratio for white female students was 38.2 percent, 2.06 times the ratio for black female students. However, 2.06 is almost as high as 1.94, the analogous ratio for female nonstudents.

Labor Force Participants

Of the 4,856 white male students, 2,125 were labor force participants; 2,123 of the 8,239 black students were participants. Even though the original sample contained 2.2 million people, only 505 unemployed black male teen students made it into this final group. Of the 2,125 white student participants, 205 were unemployed. This means that the black unemployment rate among teenage students was 23.8 percent, while the white unemployment rate was 11.8 percent. Note that the ratio of the black rate to the white rate is worse for male students than it was for male nonstudents: 2.02, compared with 1.65 as computed from Table 4, or compared with 1.68, as computed from the LPM regressions on the 0.1 percent sample reported in Table 5(a).

Table 8(h) shows that 2,013 of the 4,811 white female students were labor force participants; part (g) of the same table shows that 2,065 of the 8,505 black female students participated in the labor force. Some 176 of the whites and 489 of the blacks were unemployed, which yields female student rates of 8.7 percent and 23.7 percent, respectively. The black-white ratio of female student unemployment rates computed from this table is 2.71. Since parts (g) and (h) of Table 4 imply a nonstudent ratio of 2.38, the racial ratio of unemployment rates is worse for female students as well as for male students.

Gross Effect of Race on Unemployment

In Tables 9(a)-9(d) are linear probability models exactly like those in Table 5, but this time they are estimated for students. "MODEL01" of Table 9(a) shows that the gross racial differential in male unemployment-population ratios was 1.55 percent and of marginal statistical significance.[18] Part (c) of the table shows a slightly

---

[18] Like the LPM coefficient, the logistic coefficient is small and barely significant at the 7 percent level. In the sample restricted to labor force participants, the logistic coefficient on race is large and has an asymptotic t-statistic of 5.8.

BEST COPY AVAILABLE

TABLE 9(a) Linear Probability Models: Civilian, Student Male Teenagers

```
MODEL:    MODEL01                    SSE    287.511459         F RATIO          3.28
                                     DFE          5660         PROB>F         0.0704
DEP VAR: U                           MSE      0.050797         R-SQUARE       0.0006

VARIABLE             DF      ESTIMATE        ERROR          T RATIO      PROB>|T|
INTERCEPT             1      0.051483  0.003234298          15.9177        0.0001
COLOR                 1      0.015515  0.008572301           1.8099        0.0704

MODEL:    MODEL02                    SSE       1272.48         F RATIO        124.54
                                     DFE          5660         PROB>F         0.0001
DEP VAR: M                           MSE      0.224820         R-SQUARE       0.0215

VARIABLE             DF      ESTIMATE        ERROR          T RATIO      PROB>|T|
INTERCEPT             1      0.386120  0.006804213          56.7472        0.0001
COLOR                 1     -0.201257     0.018034         -11.1598        0.0001

MODEL:    MODEL03                    SSE      1346.966         F RATIO        100.21
                                     DFE          5660         PROB>F         0.0001
DEP VAR: N                           MSE      0.237980         R-SQUARE       0.0174

VARIABLE             DF      ESTIMATE        ERROR          T RATIO      PROB>|T|
INTERCEPT             1      0.562397  0.007000527          80.3364        0.0001
COLOR                 1      0.185742     0.018554          10.0106        0.0001
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 9(b) Linear Probability Models: Civilian, Student Labor Force Participants, Male Teenagers

```
MODEL:    MODEL21                    SSE    260.223703         F RATIO         36.46
                                     DFE          2326         PROB>F         0.0001
DEP VAR: U                           MSE      0.111876         R-SQUARE       0.0154

                                PARAMETER     STANDARD
VARIABLE             DF          ESTIMATE        ERROR          T RATIO      PROB>|T|

INTERCEPT             1          0.117647  0.007255864          16.2141        0.0001
COLOR                 1          0.148363     0.024572           6.0380        0.0001
------------------------------------------------------------------------------------

MODEL:    MODEL22                    SSE    260.223703         F RATIO         36.46
                                     DFE          2326         PROB>F         0.0001
DEP VAR: M                           MSE      0.111876         R-SQUARE       0.0154

                                PARAMETER     STANDARD
VARIABLE             DF          ESTIMATE        ERROR          T RATIO      PROB>|T|

INTERCEPT             1          0.882353  0.007255864         121.6055        0.0001
COLOR                 1         -0.148363     0.024572          -6.0380        0.0001
------------------------------------------------------------------------------------

MODEL:    MODEL31                    SSE    259.708068         F RATIO         13.70
                                     DFE          2324         PROB>F         0.0001
DEP VAR: U                           MSE      0.111750         R-SQUARE       0.0174

                                PARAMETER     STANDARD
VARIABLE             DF          ESTIMATE        ERROR          T RATIO      PROB>|T|

INTERCEPT             1          0.127130   0.00855751          14.8559        0.0001
SO                    1         -0.033641     0.016118          -2.0871        0.0370
COLOR                 1          0.153358     0.037895           4.0469        0.0001
INTRACT               1       0.009351145     0.050459           0.1853        0.8530
------------------------------------------------------------------------------------

MODEL:    MODEL32                    SSE    259.708068         F RATIO         13.70
                                     DFE          2324         PROB>F         0.0001
DEP VAR: M                           MSE      0.111750         R-SQUARE       0.0174

                                PARAMETER     STANDARD
VARIABLE             DF          ESTIMATE        ERROR          T RATIO      PROB>|T|

INTERCEPT             1          0.872870   0.00855751         102.0005        0.0001
SO                    1          0.033641     0.016118           2.0871        0.0370
COLOR                 1         -0.153358     0.037895          -4.0469        0.0001
INTRACT               1       -0.00935114     0.050459          -0.1853        0.8530
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 9(c) Linear Probability Models: Civilian, Student Female Teenagers

```
MODEL:    MODEL01                SSE   211.346319        F RATIO          3.77
                                 DFE         5683        PROB>F         0.0524
DEP VAR: U                       MSE     0.037189        R-SQUARE       0.0007

VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|
INTERCEPT           1       0.036583  0.002780295        13.1579        0.0001
COLOR               1       0.013760  0.007090884         1.9406        0.0524

MODEL:    MODEL02                SSE     1256.516        F RATIO        155.97
                                 DFE         5683        PROB>F         0.0001
DEP VAR: M                       MSE     0.221101        R-SQUARE       0.0267

VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|
INTERCEPT           1       0.381833  0.006779186        56.3244        0.0001
COLOR               1      -0.215929     0.017290       -12.4889        0.0001

MODEL:    MODEL03                SSE     1318.858        F RATIO        130.26
                                 DFE         5683        PROB>F         0.0001
DEP VAR: N                       MSE     0.232071        R-SQUARE       0.0224

VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|
INTERCEPT           1       0.581584  0.006945323        83.7375        0.0001
COLOR               1       0.202169     0.017713        11.4133        0.0001
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 9(d) Linear Probability Models: Civilian, Student Labor Force Participants, Female Teenagers

```
MODEL:    MODEL21                SSE   194.368636        F RATIO         41.33
                                 DFE         2200        PROB>F         0.0001
DEP VAR: U                       MSE     0.088349        R-SQUARE       0.0184

                           PARAMETER     STANDARD
VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|

INTERCEPT           1       0.087432  0.006624908        13.1974        0.0001
COLOR               1       0.145373     0.022613         6.4287        0.0001
------------------------------------------------------------------------------

MODEL:    MODEL22                SSE   194.368636        F RATIO         41.33
                                 DFE         2200        PROB>F         0.0001
DEP VAR: M                       MSE     0.088349        R-SQUARE       0.0184

                           PARAMETER     STANDARD
VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|

INTERCEPT           1       0.912568  0.006624908       137.7481        0.0001
COLOR               1      -0.145373     0.022613        -6.4287        0.0001
------------------------------------------------------------------------------

MODEL:    MODEL31                SSE   194.338377        F RATIO         13.88
                                 DFE         2198        PROB>F         0.0001
DEP VAR: U                       MSE     0.088416        R-SQUARE       0.0186

                           PARAMETER     STANDARD
VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|

INTERCEPT           1       0.089833  0.007846721        11.4485        0.0001
SO                  1    -0.00837706     0.014656        -0.5716        0.5677
COLOR               1       0.140052     0.032831         4.2659        0.0001
INTRACT             1       0.013786     0.045803         0.3010        0.7635
------------------------------------------------------------------------------

MODEL:    MODEL32                SSE   194.338377        F RATIO         13.88
                                 DFE         2198        PROB>F         0.0001
DEP VAR: M                       MSE     0.088416        R-SQUARE       0.0186

                           PARAMETER     STANDARD
VARIABLE           DF       ESTIMATE        ERROR        T RATIO      PROB>|T|

INTERCEPT           1       0.910167  0.007846721       115.9933        0.0001
SO                  1    0.008377063     0.014656         0.5716        0.5677
COLOR               1      -0.140052     0.032831        -4.2659        0.0001
INTRACT             1      -0.013786     0.045803        -0.3010        0.7635
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

more significant racial differential of 1.38 percent for females. However, as was the case for nonstudents, a regression for a sample restricted to labor force participants tells a very different story.

Table 9(b) gives as the gross differential between black and white male student unemployment rates a highly significant 14.8 percent. This difference is greater than the white unemployment rate, 11.8 percent. When computed from this regression, the ratio of black to white student unemployment rates is 2.26. When computed from Table 8 the ratio is 2.02. Once again, the difference between the two computations stems from the reduced sampling error in the tenfold larger sample summarized in the earlier table. "MODEL31" shows that, once again, the racial differential is larger outside the South than in the South.

Part (d) of Table 9 shows a gross female student racial unemployment differential that is very close to the male differential; it is 14.5 percent and highly significant. "MODEL31" shows something different for women, however. The implied ratios of black to white student unemployment rates are 2.89 in the South and 2.56 outside the South. For men, the ratio was larger outside the South.

Effect of Additional Explanatory Variables

Tables 10(a)-10(d) show the same equations for students that were estimated for nonstudents in Table 6. There are two dramatic changes. First, for male students but not for female students, race loses its significant effect entirely, regardless of whether age is included. Second, for male students but not for female students, household income, net of the teenager's earnings, emerges from insignificance as a strong explainer of variation in unemployment. When age is included in the equation, household income is the greatest reducer of chi-square for young men, stronger even than education.

SUMMARY

This paper presented a very brief review of the economic literature on unemployment, in particular the implications for empirical work on youth unemployment and labor force participation. New structural models for use with microdata were developed. These models may reduce two important sources of bias in estimates of the impact of race on unemployment: simultaneity and ecological correlation.

Original empirical work based on 1980 Census microdata shows, using simple, single-equation methods, that the labor force participation decision cannot be ignored in estimating the impact of race on unemployment. For students and nonstudents, male and female, there is no gross racial differential to be explained if unemployment is measured as the ratio of the number of unemployed to the size of the population. However, when samples are restricted to labor force participants, large and significant racial differentials emerge. These racial differentials vary by sex, region, and school enrollment status. A racial difference

TABLE 10(a) Conditional Employment Probabilities Using Age as a Regressor, Civilian, Student Labor Force Participants, Male Teenagers

```
                          LOGISTIC REGRESSION PROCEDURE
                             DEPENDENT VARIABLE: U

            2328 OBSERVATIONS
             304 POSITIVES
            2024 NEGATIVES
               0 OBSERVATIONS DELETED DUE TO MISSING VALUES

   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1804.18

    CONVERGENCE OBTAINED IN  6 ITERATIONS.                    D=0.031.
    MAX ABSOLUTE DERIVATIVE=0.4640D-05.                -2 LOG L= 1731.04.
    MODEL CHI-SQUARE=   73.14 WITH  10 D.F.                    P=0.0    .

VARIABLE         BETA           STD. ERROR        CHI-SQUARE     P        D

INTERCEPT    1.76678657       1.17332444             2.27    0.1321
EDUCATN     -0.12846921       0.06282174             4.18    0.0409    0.002
AGE         -0.10924862       0.08495874             1.65    0.1985    0.001
HHINCOME    -0.01426909       0.00428306            11.10    0.0009    0.005
FAM         -0.11351487       0.77743107             0.02    0.8839    0.000
DISABIL      0.94116955       0.36656585             6.59    0.0102    0.003
SO          -0.38920228       0.16154140             5.80    0.0160    0.002
CC          -0.20908409       0.17225555             1.47    0.2248    0.001
SOXCOL       0.46637668       0.38838368             1.44    0.2298    0.001
CCXCOL       0.92305443       0.39506808             5.46    0.0195    0.002
COLOR        0.24863929       0.39256550             0.40    0.5265    0.000
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 10(b) Conditional Employment Probabilities, Civilian, Student Labor Force Participants, Male Teenagers

```
                          LOGISTIC REGRESSION PROCEDURE
                             DEPENDENT VARIABLE: U

            2328 OBSERVATIONS
             304 POSITIVES
            2024 NEGATIVES
               0 OBSERVATIONS DELETED DUE TO MISSING VALUES

   -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1804.18

    CONVERGENCE OBTAINED IN  6 ITERATIONS.                    D=0.030.
    MAX ABSOLUTE DERIVATIVE=0.2649D-05.                -2 LOG L= 1732.72.
    MODEL CHI-SQUARE=   71.46 WITH   9 D.F.                    P=0.0    .

VARIABLE         BETA           STD. ERROR        CHI-SQUARE     P        D

INTERCEPT    0.40037328       0.50537597             0.63    0.4282
EDUCATN     -0.18290315       0.04526800            16.33    0.0001    0.007
HHINCOME    -0.01358426       0.00422821            10.32    0.0013    0.004
FAM         -0.19656901       0.77373926             0.06    0.7995    0.000
DISABIL      0.92588989       0.36581134             6.41    0.0114    0.003
SO          -0.38803809       0.16150578             5.77    0.0163    0.002
CC          -0.21812070       0.17209600             1.61    0.2050    0.001
SOXCOL       0.44365482       0.38765566             1.31    0.2524    0.001
CCXCOL       0.91135256       0.39467425             5.33    0.0209    0.002
COLOR        0.25223778       0.39166524             0.41    0.5196    0.000
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

BEST COPY AVAILABLE

TABLE 10(c) Conditional Employment Probabilities Using Age as a Regressor, Civilian, Student Labor Force Participants, Female Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                      DEPENDENT VARIABLE: U

     2202 OBSERVATIONS
     1982  U       = 0
      220  U       = 1
        0 OBSERVATIONS DELETED DUE TO MISSING VALUES

  -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1430.79

   MODEL CHI-SQUARE=   61.55 WITH  10 D.F.   (SCORE STAT.) P=0.0    .
   CONVERGENCE OBTAINED IN  6 ITERATIONS.                  R= 0.147.
   MAX ABSOLUTE DERIVATIVE=0.1323D-11.               -2 LOG L= 1379.95.
   MODEL CHI-SQUARE=   50.84 WITH  10 D.F.   (-2 LOG L.R.) P=0.0000.

VARIABLE          BETA          STD. ERROR      CHI-SQUARE      P         R

INTERCEPT     1.75277707        1.39271281         1.58     0.2082
EDUCATN      -0.07694844        0.09504671         0.66     0.4182     0.000
AGE          -0.18154598        0.11397084         2.54     0.1112    -0.019
HHINCOME     -0.00251025        0.00444995         0.32     0.5727     0.000
FAM           0.20474210        0.45725416         0.20     0.6543     0.000
DISABIL       1.04000882        0.47274892         4.84     0.0278     0.045
SO           -0.10730316        0.17961398         0.36     0.5502     0.000
CC            0.05299589        0.18402893         0.08     0.7734     0.000
SOXCOL        0.15040473        0.40052623         0.14     0.7073     0.000
CCXCOL       -0.44346755        0.40144515         1.22     0.2693     0.000
COLOR         1.40902455        0.36442253        14.95     0.0001     0.095
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

TABLE 10(d) Conditional Employment Probabilities, Civilian, Student Labor Force Participants, Female Teenagers

```
                    LOGISTIC REGRESSION PROCEDURE
                      DEPENDENT VARIABLE: U

     2202 OBSERVATIONS
     1982  U       = 0
      220  U       = 1
        0 OBSERVATIONS DELETED DUE TO MISSING VALUES

  -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY= 1430.79

   MODEL CHI-SQUARE=   59.45 WITH   9 D.F.   (SCORE STAT.) P=0.0    .
   CONVERGENCE OBTAINED IN  6 ITERATIONS.                  R= 0.145.
   MAX ABSOLUTE DERIVATIVE=0.0           .           -2 LOG L= 1382.65.
   MODEL CHI-SQUARE=   48.14 WITH   9 D.F.   (-2 LOG L.R.) P=0.0000.

VARIABLE          BETA          STD. ERROR      CHI-SQUARE      P         R

INTERCEPT    -0.25593762        0.64135974         0.16     0.6899
EDUCATN      -0.18882782        0.05732037        10.85     0.0010    -0.079
HHINCOME     -0.00182823        0.00440851         0.17     0.6784     0.000
FAM           0.17669396        0.45545650         0.15     0.6981     0.000
DISABIL       0.99716482        0.47069812         4.49     0.0341     0.042
SO           -0.12178188        0.17983748         0.46     0.4983     0.000
CC            0.03780462        0.18384286         0.04     0.8371     0.000
SOXCOL        0.11184032        0.39910105         0.08     0.7793     0.000
CCXCOL       -0.45539480        0.40061771         1.29     0.2557     0.000
COLOR         1.41227175        0.36298837        15.14     0.0001     0.096
```

SOURCE: Bureau of the Census, "Public-Use Microdata Sample C" (Washington, D.C.: U.S. Department of Commerce, 1983): blacks, noninmate 1 percent sample; whites, noninmate 0.1 percent subsample.

in labor force participation tends in each case to offset almost completely the racial difference in the unemployment rate, so that there are no significant differences in unemployment-population ratios by race. Two very different structural interpretations of these findings are higher reservation wages for blacks and discouraged-worker effects.

REFERENCES

Abowd, John M., and Mark R. Killingsworth
1984 Do minority/white unemployment differences really exist? _Journal of Business and Economic Statistics_ 2(1):64-72.

Betsey, Charles L.
1978 Differences in unemployment experience between blacks and whites. _American Economic Review_ 68(2):192-197.

Brown, Charles
1981 Estimating the effects of a youth differential on teenagers and adults. Pp. 389-427 in _Report of the Minimum Wage Study Commission_. Vol. 5. Washington, D.C.: Minimum Wage Study Commission.

Bureau of the Census
1983 _Census of Population and Housing, 1980: Public-Use Microdata Samples Technical Documentation_. Data User Services Division. Washington, D.C.: Bureau of the Census.

Cave, George
1981 _The Incidence and Duration of Unemployment_. Final Report to the U.S. Department of Labor under Grant No. 91-17-78-17. Springfield, Va.: National Technical Information Service.
1983 Job rationing, unemployment, and discouraged workers. _Journal of Labor Economics_ 1(3):286-307.

Clark, Kim B., and Lawrence H. Summers
1982 The dynamics of youth unemployment. In Richard Freeman and David Wise, eds., _The Youth Labor Market Problem: Its Nature, Causes, and Consequences_. Chicago, Ill.: University of Chicago Press.

Conant, James B.
1961 Social dynamite in our large cities. Pp. 26-42 in _Social Dynamite: The Report of the Conference on Unemployed, Out-of-School Youth in Urban Areas_. Washington, D.C.: National Committee for Children and Youth.

Demsetz, Harold
1961 Structural unemployment: a reconsideration of the evidence and the theory. _Journal of Law and Economics_ 4(October):80-92.

Fearn, Robert M.
1968 Labor Force and School Participation of Teenagers. Ph.D. dissertation. Department of Economics, University of Chicago.

Feldstein, Martin S.
1976 Temporary layoffs in the theory of unemployment. _Journal of Political Economy_ 84(5):937-957.

Fleisher, Belton, and George Rhodes

1976 Unemployment and the labor force participation of married men and women: a simultaneous model. Review of Economics and Statistics 58(4):398-406.

Freeman, Richard B.

1982 Economic determinants of geographic and individual variation in the labor market position of young persons. Pp. 115-154 in Richard Freeman and David Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. Chicago, Ill.: University of Chicago Press.

Freeman, Richard B., and David A. Wise

1982 The youth labor market problem: its nature, causes, and consequences. Pp. 1-16 in Richard Freeman and David Wise, eds., The Youth Labor Market problem: Its Nature, Causes, and Consequences. Chicago, Ill.: University of Chicago Press.

Gilman, Harry J.

1965 Economic discrimination and unemployment. American Economic Review 55(5, Part 1):1077-1096.

Hanoch, Giora

1976 Hours and weeks in the theory of labor supply. R-1787-HEW. Santa Monica, Calif.: Rand Corporation.

Heckman, James J.

1974 Shadow prices, market wages and labor supply. Econometrica 42(4):679-694.

1979 Sample selection bias as a specification error. Econometrica 47(1):153-161.

Hey, John D.

1981 Economics in Disequilibrium. Oxford: Martin Robertson.

Kalachek, Edward

1969 Determinants of teenage employment. Journal of Human Resources 4(1):3-21.

Kiefer, Nicholas, and George Neumann

1979 An empirical job-search model, with a test of the constant reservation-wage hypothesis. Journal of Political Economy 87(1):99-107.

1981 Estimation of wage offer distributions and reservation wages. In S. Lippmann and J. McCall, eds., Studies in the Economics of Search. Amsterdam: North-Holland.

Killingsworth, Charles C.

1978 The fall and rise of the idea of structural unemployment. Industrial Relations Research Association Proceedings 31(August):1-13.

Levy, Frank

1982 Comment. P. 340 in Richard Freeman and David Wise, eds., The Youth Labor Market Problem: Its Nature, Causes, and Consequences. Chicago, Ill.: University of Chicago Press.

Lucas, Robert E., Jr.

1978 Unemployment policy. American Economic Review 68(2):353-357.

Nerlove, Marc, and S. James Press
1973 Univariate and Multivariate Log-Linear and Logistic Models. Report R-1306-EDA/NIH. Santa Monica, Calif.: Rand Corporation.

Pindyck, Robert S., and Daniel L. Rubinfeld
1981 Econometric Models and Economic Forecasts. 2d edition. New York: McGraw-Hill.

Rosen, Richard J.
1984 Regional variations in employment and unemployment during 1970-82. Monthly Labor Review 107(2):38-45.

Rosenfeld, Carl
1977 Job search of the unemployed, May 1976. Bureau of Labor Statistics, Special Labor Force Report No. 210. Monthly Labor Review 100(11):39-43.

Stephenson, Stanley P., Jr.
1976 The economics of youth job search behavior. Review of Economics and Statistics 58(1):104-111.

Weiss, Andrew
1980 Job queues and layoffs in markets with flexible wages. Journal of Political Economy 88(3):526-538.

Hispanic Youth in the Labor Market: An Analysis of High School and Beyond

Roberto Fernandez

INTRODUCTION

The number of people of Spanish origin in the United States rose from 9.1 million in 1970 to 14.6 million in 1980 (Bureau of the Census, 1982:Table 3.2). In addition to this growth in absolute numbers, the relative share of the population accounted for by Hispanics grew from 4.5 percent in 1970 to 6.4 percent in 1980. Although part of these increases probably reflect changes in Census Bureau enumeration procedures (see Jaffe et al., 1980:311-313 and Appendix A) and an undercount of Hispanics in 1970 (Bureau of the Census, 1979a; U.S. Commission on Civil Rights, 1974), it is clear that Hispanics are a substantial and growing part of the population of the United States.

Hispanics tend to be younger than non-Hispanic whites. According to the March 1977 Current Population Survey, the median age of the Spanish-origin population was 22.1 years versus 30.0 for non-Hispanic whites (Bureau of the Census, 1979b:Table C). Since Hispanics are disproportionately young, they are more likely than non-Hispanic whites to suffer the employment problems that youth in general face in the labor market, e.g., low employment and low labor force participation rates. In fact, the data show that regardless of age, rates of employment and labor force participation are lower for Hispanics than for non-Hispanic whites, but not as low as for native Americans or non-Hispanic blacks (U.S. Commission on Civil Rights, 1978:Table 3.1). However, differences in population-age profiles cannot explain why Hispanic youths are less successful than white majority youths in the labor market. For example, among those aged 16-19 in 1981, Hispanics had an unemployment rate of 24.1 percent and a civilian labor force participation rate of 46.3 percent compared with 17.3 and 59.0 percent, respectively, for whites and 41.5 and 37.4 percent, respectively, for blacks (National Commission for Employment Policy, 1982:Table 1). Data from the March 1980 Current Population Survey show that Hispanic youths encounter other barriers in the labor market, as well. Among those

---

Roberto M. Fernandez is assistant professor in the Department of Sociology, University of Arizona.

aged 14-19, Hispanics performed worse than non-Hispanic whites and blacks on three out of four indicators of "underemployment," i.e., Hispanic youths are more likely to experience involuntary part-time employment, live in households whose incomes fall below the poverty line, and receive inequitable pay than are non-Hispanic whites and blacks, although blacks are more likely than Hispanics to be intermittently employed (U.S. Commission on Civil Rights, 1982:Table 5.4; also see Clogg, 1979; Sullivan, 1979).

While it is clear that Hispanic youths are less successful than non-Hispanic whites in the labor market, the reasons underlying these disadvantages are less obvious. Determining the causes of Hispanic underachievement has important practical implications; the choice of relevant policies to ameliorate those conditions depends on understanding the factors that lead Hispanics to fare less well than non-Hispanic whites in the labor market.

In this paper, I undertake two tasks. First, I document the extent of the employment difficulties of Hispanics compared with non-Hispanic whites and blacks using data from High School and Beyond, a national longitudinal study of high school sophomores and seniors in 1980. Because respondents in this survey were enrolled in school in 1980, labor force statistics derived from the survey will not be directly comparable with statistics based on household surveys of the labor force, e.g., the Current Population Surveys. However, because respondents in High School and Beyond all started in high school, the survey is ideal for studying the transition of youths from school to work. Although past research has found that Hispanic youths fare less well than non-Hispanic white youths on many indicators of labor market success (e.g., wages, family income; see Mayers, 1980), I will focus on two important measures, i.e., labor force participation and unemployment rates. Also, because of the interdependency between youths' leaving school and their employment decisions during the school-to-work transition (see National Commission for Manpower Policy, 1976; Stevenson, 1978b), I discuss the indicators of labor force status by school status, i.e., by high school dropout versus in-school youths for the sophomore cohort, and by out-of-school versus attending postsecondary institution for the senior cohort.

My second task is to examine some of the presumed causes of the difficulties of Hispanic youths in the labor market. As with the descriptive analyses, labor force status will be studied in conjunction with school enrollment. Therefore, as a dependent variable, labor force participation has four categories: participating in the labor force and enrolled in school, participating in the labor force and out of school, out of the labor force and enrolled in school, and out of the labor force and out of school. Employment status is treated similarly and also has four categories: employed and enrolled in school, unemployed and enrolled, employed and out of school, and unemployed and out of school. Using logistic regression analysis, I predict these labor force and enrollment status indicators with measures of family background, school performance, language, immigration history, and other demographic variables.

The remainder of this paper addresses six topics: (1) the extant knowledge on the labor market status of Hispanic youth, (2) the characteristics of the High School and Beyond data set and the advantages of using this survey for studying Hispanic youths' achievement, (3) the findings of descriptive analyses of the various subpopulations under study, (4) the findings of causal analyses of labor force and enrollment status indicators, (5) the results of empirical analyses of labor force participation and employment, and (6) recommendations for policies to improve the status of Hispanic youths in the labor market.

LABOR MARKET STATUS OF HISPANIC YOUTHS

As the Hispanic share of the population has increased, the socioeconomic achievement of Hispanics has increasingly become the object of policy discussion (see e.g., National Center for Education Statistics, 1980; National Commission for Employment Policy, 1982). Unfortunately, research on Hispanics in general, and Hispanic youths in particular, has been hampered by a lack of suitable data (see Estrada, 1980). For this reason, information on the labor market status of Hispanic youths is poor relative to that available on non-Hispanic white and black youths (see, e.g., Freeman and Wise, 1982).

Because much research suggests that the decisions young people make on participating in the labor force and continuing in school are interdependent (see B. Duncan, 1965; Edwards, 1976; Ornstein, 1976), it is important to examine the causes of Hispanics' educational difficulties when considering the determinants of their underachievement in the labor market. These causes can be divided into two types: general and specific. General factors, such as sex and family socioeconomic status, are potentially important for explaining the school and labor market achievements of everyone in the United States, regardless of their race or ethnicity. Specific factors are characteristics that are particularly salient for some minority groups and are expected to affect those groups disproportionately. For Hispanics, specific factors are language skills and immigration history.

Distinguishing between the effects of general and specific factors on the labor market achievements of Hispanics is important for policy purposes. For example, if Hispanics' labor market disadvantages are due primarily to their lower levels of family socioeconomic status, then general policies designed to help all poor people would help improve Hispanics' labor market status. However, if specific factors, such as language background, account for a large portion of Hispanics' school or labor market difficulties, then general policies are apt to do little to improve Hispanics' performance in school or in the labor market. In this case, policy instruments, such as bilingual education, may have to be targeted specifically on the Hispanic population to improve Hispanics' labor market achievements.

General Factors

Recent studies identify Hispanics' low levels of education as one of the most important general factors that explain Hispanic youths' underachievement in the labor market (National Commission for Employment Policy, 1982). Indeed, there is much evidence that Hispanics experience considerable educational difficulties. At each age level, school enrollment rates for Hispanics lag those for whites (National Center for Education Statistics, 1980:Table 1.08). Hispanics also have significantly lower rates of high school completion than non-Hispanic whites (National Center for Education Statistics, 1980:Table 1.09). Among those who remain in school, Hispanics are much more likely to have to repeat a grade as they progress through school than non-Hispanic whites (National Center for Education Statistics, 1980:Table 2.21). Hispanic educational difficulties extend to the postsecondary level, as well. Hispanics are underrepresented in undergraduate, graduate, and professional programs relative to their share of the population (National Center for Education Statistics, 1980:Table 3.01) and underrepresented among the nation's degree recipients (National Center for Education Statistics, 1980:Table 3.21).

There is much research, however, that suggests that these educational difficulties are, in turn, caused by other general factors. In other words, Hispanics' low levels of education are an endogenous cause of their labor market difficulties. Other factors that influence Hispanics' educational attainments may also influence their labor market achievements directly, or indirectly through educational attainment. The most important of these factors is family socioeconomic background (Blau and Duncan, 1967; O. Duncan et al., 1972; Jencks et al., 1972). This is generally interpreted to mean that higher income families, in which parents have high educational and occupational statuses, are more likely to support their children in educational endeavors. Less affluent families may not emphasize education for their children as much because the relative cost of college and higher education relative to the prospective returns on this investment do not justify the expenditure.

In addition to the indirect effects of family background on labor market outcomes through education, most studies have also shown direct effects of family background on offsprings' labor market success (e.g., Blau and Duncan, 1967). Unfortunately, the mechanisms by which these direct effects operate are not well understood in the case of occupational status and earnings. A number of complicated and sometimes crosscutting processes appear to be operating to convert family background into occupational status and earnings (see Jencks et al., 1979:Ch. 3). However, in the case of youths' labor force participation and employment, it has been shown that children of poorer families are likely to enter the labor force at earlier ages than offspring of wealthier families (Neugarten and Hagestad, 1976), even after the effects of educational attainment are controlled (Hogan, 1981:Ch. 5). The direct effects of family background on labor force participation and employment have also been documented for high school students (Lewin-Epstein, 1981).

A number of recent studies of various Hispanic subgroups have come to the same conclusion as the studies of the general population: family socioeconomic background is an important determinant of Hispanics' educational achievements (Aspira, 1976; Fligstein and Fernandez, 1982, 1985; Nielsen and Fernandez, 1982) and occupational achievements (see Tienda, 1981; McLaughlin, 1982; Stolzenberg, 1982). Although there has been very little empirical research on the topic, family background factors have also been cited as important determinants of Hispanic youths' labor market difficulties (National Commission for Employment Policy, 1982). The most important of these background factors is thought to be family income (see, e.g., Aspira, 1976; Briggs et al., 1977). Hispanics are much poorer than non-Hispanics. In 1977, the median family income of Hispanics was $11,421 compared with $16,284 for non-Hispanics (Bureau of the Census, 1979b). Hispanic families also tend to be larger than non-Hispanic families (3.88 persons versus 3.31; see Bureau of the Census, 1979b). Researchers argue that to help ease the family's financial burdens, Hispanic youths are more likely to enter the labor force than non-Hispanics. However, as Hispanic youths become increasingly involved in the world of work, they are correspondingly drawn out of school. Hence, they are presented with a self-reinforcing situation wherein they leave school to work, and then their lack of schooling becomes a major obstacle to their success in the labor market.

Specific Factors

Language problems often head the list of specific factors that may disproportionately affect Hispanics' educational and labor market achievement (U.S. Department of Health, Education and Welfare, 1974; Barrera, 1979; National Commission for Employment Policy, 1982).

For youths entering school from non-English language backgrounds, limited English proficiency can certainly constitute a barrier to effective learning in English-only school systems. Students who cannot understand what is being taught through the medium of the English language are likely to have both psychological and substantive difficulties in their interactions with teachers and in their studies. As a consequence, it is often argued, these students tend to have lower scholastic performance and are more likely to drop out of school (see, e.g., Hirano-Nakanishi and Diaz, 1982; Steinberg et al., 1982a). Survey research in this area tends to support these notions. For example, Lopez (1976) found that U.S.-born Mexican-Americans raised in Spanish-language environments had lower educational attainments than their U.S.-born Mexican-American counterparts raised in English-language environments.

To the extent that Hispanics speak only or predominantly Spanish when they complete their schooling, studies suggest negative effects on work-related variables (Lopez, 1976; Chiswick, 1978; Veltman, 1981; Garcia, 1983). Because effective communication is an important component of any production activity, Spanish monolinguals' inability to communicate in English may make them less attractive to employers.

In addition, Spanish monolinguals are likely to receive lower wages (see Stolzenberg, 1982; McManus et al., 1983; Tienda, 1983) and to be underemployed and unemployed (Carliner, 1981). For Spanish-dominant bilinguals, there is some evidence to suggest that accented or non-standard English may result in employers consciously or unconsciously showing bias against Spanish users (Garcia, 1983; Lopez, 1976).

The use of Spanish, or any non-English language, however, may not be intrinsically harmful to bilinguals' educational and work-related achievement. In fact, the effects of using Spanish, controlling for English proficiency, have been subject to debate. One argument emphasizes the cost of bilingualism. In this view, the coexistence of two lexicons and two syntaxes in the mind of the bilingual represents a drain on a finite amount of mental energy, and less mental energy will be available, for example, for intellectual tasks in school. Another harmful consequence of bilingualism may be that the languages interfere with one another. This process is known as "code switching" (Albert and Obler, 1978). In this view, Spanish proficiency and use should retard achievement in English-language schools.

On the other hand, other studies have found that bilingual proficiency is an asset or does not hinder bilinguals either in school (Peal and Lambert, 1962; Lambert and Tucker, 1972; Cummins, 1976, 1977; Veltman, 1980; Fernandez and Nielsen, 1984) or in the labor market (Lopez, 1976; Tienda, 1981:Ch. 8; Garcia, 1983). The fact that bilinguals have two codes for every concept may help them to realize that codes are arbitrary. Therefore, bilingualism may serve to stimulate intellectual development for abstract reasoning tasks, which should be expressed in higher scholastic achievement. Regarding the labor market, some studies have suggested that bilingualism is a form of human capital that may yield returns in the labor market (Carliner, 1976; Tienda, 1982). Therefore, in areas where there is a demand for workers who can communicate in more than one language, bilinguals will be in an advantageous position in the labor market. Also, Lopez (1976) suggests that the knowledge of Spanish may aid bilinguals to find jobs in blue-collar job markets.

Results from research on the effects of immigration patterns on achievement have been inconsistent. A substantial body of work documents the fact that despite an initial lack of familiarity with language and customs, immigrants sometimes achieve higher educational and occupational levels than nonimmigrants (Blau and Duncan, 1967). Chiswick's research (1977, 1978, 1979, 1980a, 1980b, 1982) tends to support these findings, although he shows that an initial adjustment period is needed before immigrants' attainments overtake those of nonimmigrants. Carliner's (1980) analyses support Chiswick's initial adjustment period: recent immigrants generally receive lower wages than second-generation workers, but second-generation workers receive higher wages than do third-generation workers. These findings have been taken to be indicative of a selection process whereby immigrants' high level of motivation manifests itself in higher socioeconomic attainment. Nielsen and Fernandez (1982) speculate that this high level of motivation may be passed on to the immigrants' children, thus explaining why progeny of more recent immigrants perform better in high school.

However, when considering Hispanic immigrants specifically, others (e.g., Featherman and Hauser, 1978; Borjas, 1982; Tienda, 1983) find that Hispanic immigrants are at a socioeconomic disadvantage (relative to long-time residents), which these researchers attribute to difficulties of language, cultural adjustment, and transferability of skills. In addition, using census data, Jaffe et al. (1980) have shown that Hispanic immigrants have lower levels of education than other immigrants, which can result, through the general mechanisms described above, in lower educational and occupational achievements for themselves and their children.

In addition to the above research, which focuses on the characteristics of immigrants that lead them to achieve well or poorly in the United States, a number of researchers have emphasized that the political and economic climate of the United States at the time of immigration may be an important determinant of how well and how quickly immigrants are assimilated. The Cubans are an example here. It has been argued that the particular historical circumstances under which the initial wave of Cuban immigration took place--the climate of general acceptance by the host population, the legal status of Cubans as political rather than economic migrants (Pedraza-Bailey, 1980; Wilson and Portes, 1980), and supportive governmental policies at the time of Cuban settlement (see, Rogg, 1974; Pedraza-Bailey and Sullivan, 1979; Sullivan and Pedraza-Bailey, 1979; Jorge and Moncarz, 1980)--explain Cubans' relative advantage over other Hispanic subgroups (see, e.g., Borjas, 1982; Nielsen and Fernandez, 1982; Portes, 1982). A number of researchers have also argued that the fact that Cuban immigrants have largely settled in an ethnic enclave (Miami) made up of previous immigrants (see Wilson and Portes, 1980; Wilson and Martin, 1982) who own about 10 percent of the businesses and employ 50 percent of Cuban males in the area (see Clark, 1977; Portes et al., 1977, 1981) has had beneficial effects on Cubans' socioeconomic achievements (see Portes and Bach, 1980; Portes, 1982).

Finally, there is a substantial literature that suggests that ethnicity, viewed as analytically separable from language and immigration factors, is related to lower achievement among Hispanics. Akin to arguments regarding the disadvantages that blacks face, it is often argued that racial-ethnic prejudice or cultural and socialization differences between majority-minority groups help to explain achievement differentials (see, e.g., Carter and Segura, 1979; Noboa, 1980; for a review, see Duran, 1983). Although measuring the effects of racial or cultural discrimination in school or in the workplace is extremely difficult, discrimination is often cited as a major reason for Hispanic youths' school and labor market difficulties (see Carter and Segura, 1979; National Commission for Employment Policy, 1982). In the case of labor market discrimination, inferences have been made on the basis of the different earnings returns to education for whites and Hispanics (National Commission for Employment Policy, 1982). Such Hispanic-white differentials in returns to education have also been offered as a reason for Hispanic youths' lower levels of schooling: Hispanic youths are less likely to judge each additional year of schooling to be worth the investment, and hence, they are more likely to drop out.

DATA AND VARIABLES

The High School and Beyond Data Base

The data analyzed in this paper are from the first two waves (1980 and 1982) of the National Center for Education Statistics (NCES) study, High School and Beyond, a longitudinal study of U.S. high school sophomores and seniors in 1980. The data were collected for NCES by the National Opinion Research Center at the University of Chicago. The base-year (1980) sample consists of 30,030 sophomores and 28,240 seniors in 1,015 high schools; the overall response rate of 84 percent. Of the respondents, 25,875 sophomores and 10,815 seniors were surveyed again in 1982. Hispanic schools were oversampled in the base year, and respondents in those schools had very high probabilities of being included in the follow-up sample (see Frankel et al., 1981).

Three features of High School and Beyond make it ideal for studying Hispanic youths' labor market achievements. First, because it is a longitudinal study of the sophomore and senior high school classes in 1980, respondents can be tracked through their transition from school to work. In addition to providing information on respondents' labor force status, the study provides detailed data on respondents' educational backgrounds and on how respondents combine their school and labor force activities.

Second, because Hispanics were oversampled, the study contains sufficient numbers of Cubans, Puerto Ricans, and Mexican-Americans for separate analyses. This is important because past research has shown that Hispanic subgroups differ in their school and labor market achievement profiles (Newman, 1978; Jaffe et al., 1980; National Center for Education Statistics, 1980; National Commission for Employment Policy, 1982; Nielsen and Fernandez, 1982).

Third, High School and Beyond is rare in that it includes many detailed questions about the linguistic practices of the respondent and his or her family (see Nielsen, 1980:App. B and C, for descriptions and discussions of the language data available from the survey). The study also provides information especially relevant to Hispanics, such as nativity and length of U.S. residence.

Definition of Comparison Groups

One of the main goals of this paper is to provide statistics showing how Hispanic youths compare with non-Hispanic youths on different measures of employment status. To this end, I have divided both the sophomore and senior samples into groups of Hispanics, non-Hispanic whites, and non-Hispanic blacks.

Self-identification was used in the survey to classify respondents' ethnic identity.[1] This was done for both theoretical and practical reasons. First, the use of self-identification to define ethnic identification is in agreement with the emerging theoretical consensus on what constitutes "ethnic" identity (Barth, 1969). Second, self-identification of ethnicity is particularly well suited for use in surveys. Smith (1980) has shown that of the various methods of classification (i.e., natal definitions, such as those based on the respondent's country of birth; behavioral definitions based on some objective cultural criterion, such as the use of a language other than English; and subjective criteria involving self-identification by the respondent), self-identification is the most efficient technique for eliciting a positive national-origin identification from respondents in the general population. (Also see Smith, 1983; for research regarding the identification of Mexican-Americans, see Hernandez et al., 1973.)

---

[1] Detailed coding information on the definition of the comparison groups and both the dependent and independent variables can be found in the appendix.

Dependent Variables

Two dependent variables are analyzed: labor force participation and unemployment. For both variables, the statistics reported are for those in the civilian labor force; those enlisted in the military are counted as out of the labor force. Because school-leaving and employment decisions are interdependent, I treat labor force and school status as simultaneous events. Therefore, for both sophomores and seniors, the two dependent variables each have four categories. For labor force participation, the four categories for sophomores are participating in the labor force and enrolled in high school; participating in the labor force and not enrolled in high school; out of the labor force and enrolled in school; out of the labor force and not enrolled in school. The variable is defined similarly for seniors with the exception that the relevant school-continuation decision is used, i.e., enrollment in postsecondary education rather than enrolled versus not enrolled in high school. The unemployment variable is defined in analogous fashion for both cohorts, i.e., among those participating in the labor force, respondents were distinguished as employed versus unemployed and enrolled in school versus not enrolled.

Independent Variables

Corresponding to the discussion in the literature review section, the independent variables are divided into two groups: general and specific. Among the general predictors of labor force and school enrollment status are family socioeconomic background, scholastic performance, demographic variables, and a measure of past labor force involvement.

For both sophomores and seniors, I measured family socioeconomic background with a composite variable derived from a number of measures of parental background and family resources.[2]

To assess the effects of scholastic performance on school retention and employment propensity, I also included among the general predictors of labor force and school enrollment status two measures of scholastic achievement: self-reported grades and a standardized-test composite. As measures of scholastic achievement, grades and test scores differ in that grades do not vary across schools, while test scores vary both within and between schools.

Three demographic variables are also included as general predictors: sex, age, and marital status. Respondents' sex is measured by a dummy variable coded 1 = male and 0 = female. Because younger respondents are expected to be less likely to participate in the labor force and more likely to be enrolled in school, I also included a measure of the respondent's age, coded in years, in the models discussed below. Marital status was included as a demographic variable to test the hypothesis that the increased financial responsibilities that accompany marriage are likely to force respondents into the labor force.

Finally, to assess the effects of past labor force experience on youths' labor force and enrollment status (see Stevenson, 1978a), I included a dummy variable measured in the base-year survey of past work experience.

Consistent with the discussion above, I also included six variables that are likely to affect Hispanics disproportionately as predictors: respondent's, father's, and mother's length of U.S. residence (measured in years); a dummy variable for whether the respondent is bilingual; proficiency in the non-English language; and proficiency in English. (See appendix for coding details.)

Regarding the language measures, I considered respondents bilingual if a language other than English was given in response to at least one of three questions: mother tongue of respondent (first language spoken), second mother tongue (other language spoken before schooling), respondent's usual language. These criteria clearly distinguish those students who have never used a language other than English from those who have had at least some natural exposure to another language. Note that this is unlike the criteria used in the Bilingual Education Act (as amended in 1974) to define children of limited English proficiency in that it does not hinge on students' level of English proficiency or nativity (see O'Malley, 1981:Ch. 2). My definition also excludes respondents with only indirect contact with languages other than English, such as those who studied a language in school as an academic subject.

---

[2] Replacing the socioeconomc status composite with measures of father's and mother's education and family income does not change the substantive results reported here. The summary measure was used because of the large numbers of missing values on parental education (15 to 20 percent) and family income (12 to 18 percent).

The non-English language proficiency scale used in the survey is based on the student's self-assessed ability to understand, speak, read, and write in the non-English language.[3] These questions are contained in a separate language questionnaire and are only asked of students who indicated some exposure to a non-English language.

Finally, English proficiency is measured by performance on a standardized vocabulary test. Note that using vocabulary-test performance as an indicator of English proficiency builds in a correlation with the standardized-test composite that is used as a measure of the student's scholastic achievement. Although it would have been preferable to have independent measures of a student's English proficiency and scholastic ability, I chose this specification because the alternative self-reported measure of English proficiency (based on a set of items parallel to the proficiency in other language items) showed very little variance.

The fact that the measure of English proficiency is correlated with the composite test measuring scholastic achievement is not of itself disturbing. Indeed, it is difficult to imagine any measure of English proficiency that is uncorrelated with these tests of scholastic achievement since the tests are written in the English language and purport to measure knowledge and skills that are largely taught in the schools through the English language. In addition, my experience in past research (Nielsen and Fernandez, 1982; Fernandez and Nielsen, 1984) and in the preliminary stages of these analyses has shown that the pattern of results is the same if one uses the vocabulary test as a measure of English proficiency and the mathematics test as a measure of scholastic achievement, or the vocabulary test with the composite test (i.e., reading, vocabulary, and mathematics) as a measure of scholastic achievement, as I have done here.

DESCRIPTIVE ANALYSES

Sophomores

For High School and Beyond, sophomores were interviewed in 1980 and two years later, regardless of whether they were still in high school. Table 1 presents high school dropout rates, by sex and population subgroup, for the sophomores.[4]

---

[3] Self-reported measures of language practices have been found to be highly reliable and valid (see Fishman, 1969; Fishman and Cooper, 1969; Fishman and Terry, 1969). Fishman and Terry (1969) attribute these qualities to the fact that respondents are forced to perform a global assessment of their linguistic behavior. Many objective measures capture more fragmentary aspects of language usage and have correspondingly lower validity.

[4] The standard errors reported in the descriptive analyses have been corrected for the effects of sample design.

TABLE 1 Dropout Rates, by Sex and Population Subgroup, for Sophomore Cohort

Population Subgroup	Male Percent	Male Standard Error	Male Sample Size	Female Percent	Female Standard Error	Female Sample Size
All Hispanics	18.5	1.3	2,280	18.1	1.3	2,210
Mexican American	21.4	1.8	1,288	20.8	1.8	1,270
Cuban	14.6	4.2	184	26.5	5.2	189
Puerto Rican	24.0	4.3	258	21.5	4.3	240
Other Latin American	12.0	2.2	550	10.8	2.2	511
Non-Hispanic blacks	20.3	1.6	1,685	14.2	1.3	1,961
Non-Hispanic whites	13.4	0.6	9,226	11.6	0.6	9,340

SOURCE: Data from High School and Beyond.

The high school dropout rate for Hispanic males overall (18.5 percent) is lower than the rate for blacks (20.3 percent) and higher than the rate for whites (13.4 percent). Consistent with past research on high school noncompletion (National Center for Education Statistics, 1980:Table 2.31) among males, Puerto Ricans have the highest dropout rate (24.0 percent), followed by Mexican-Americans (21.4 percent). "Other Latin Americans" have the lowest dropout rate among males, lower than whites (12.0 versus 13.4 percent), and the rate for Cuban males (14.6 percent) is slightly higher than the rate for whites.

Among females, Hispanics overall have the highest dropout rate (18.1 percent, compared with 14.2 percent for blacks and 11.6 percent for whites). Cuban females have the highest dropout rate of any subgroup of either sex, 26.5 percent. The pattern for the remaining Hispanic subgroups is the same as that for males: the rate for Puerto Ricans is highest (21.5 percent), followed by Mexican-Americans (20.8 percent) and other Latin Americans (10.8 percent).

The mechanisms underlying these differences in dropout rates are unclear. In part because of problems of data availability, very little empirical research exists on the causes of these different dropout rates. However, the limited research available suggests that Hispanics are likely to drop out in order to work and help support the family (National Council of La Raza, 1980). At least for males, the dropout statistics in Table 1 are consistent with this hypothesis: the dropout rates for the various subgroups increase as the median family income of the subgroup decreases (National Center for Education Statistics, 1980). The same pattern holds for females, with the exception of blacks, who drop out less than one would expect, and Cubans, who drop out more than one would expect.

Table 2 also lends support to the idea that Hispanic males tend to drop out for financial reasons. Table 2 shows labor force status by school enrollment status for the sophomores. Among out-of-school males, Hispanics overall show a higher degree of labor force attachment than do whites or blacks: 85 percent of Hispanic males were in the labor force compared with 82.5 and 73.1 percent, respectively, for whites and blacks. The relatively poor Mexican-Americans show the highest, and the relatively rich Cubans the lowest, degree of labor force involvement among the out-of-school males. In agreement with past research (Ryscavage and Mellor, 1973; Newman, 1978), the poorest subgroup of all, the Puerto Ricans, show a very low rate of labor force participation. However, this is probably due to their very high rate of military enlistment (see Table 2). A number of researchers have noted that because Puerto Ricans are heavily concentrated in New York City, which has had a declining economy in recent years, job opportunities for Puerto Ricans have worsened (Newman, 1978; National Council of La Raza, 1980). Enlistment in the military is common among those faced with bleak job prospects.

Considering females' labor force participation rates among those who are out of school, Hispanics overall again have a lower rate of participation than either whites or blacks. However, unlike past research on the adult population that has shown that the labor force participation rate of Puerto Rican females is especially low (Ryscavage and Mellor, 1973; Newman, 1978) and declining (Santana-Cooney, 1979; Santana-Cooney and Warren, 1979; National Commission for Employment Policy, 1982), Table 2 shows that among youths, Puerto Rican females have the highest rate of labor force participation, even higher than white females (67.8 versus 66.0 percent). Also contrary to the past research on the adult population that shows that Cuban females have a high rate of labor force participation relative to other Hispanic subgroups (see Ryscavage and Mellor, 1973; Newman, 1978:Table 1; National Commission for Employment Policy, 1982), the data in Table 2 show Cubans have the lowest labor force participation rate among female youths.[5]

While out-of-school Hispanics are more likely than out-of-school whites to participate in the labor force, Hispanics are less successful that whites in finding employment. For both sexes, unemployment rates among out-of-school Hispanics are considerably higher than those of out-of-school whites (males: 30 versus 21.8 percent; females: 34.9 versus 26.6 percent), albeit not as high as among out-of-school blacks (36.8 percent for black males and 47.4 percent for black females). This is consistent with past research on the general population (see McKay, 1974; Newman, 1978). Also, consistent with past research on the adult population (Newman, 1978; National Commission for Employment

---

[5] Aside from differences in the age groups studied, the discrepancies between the results in past research and the analyses here are probably due to differences in the target population. Note that none of these sources reports data on out-of-school youths.

Policy, 1982), Puerto Rican males have the highest unemployment rate among Hispanic subgroups. However, the employment situation of other Latin Americans who are out of school is significantly better: their umemployment rates for both sexes are relatively low, for males even lower than the unemployment rate for whites. Somewhat of a surprise, out-of-school Cuban females show the highest jobless rate in Table 2, 52.5 percent. The employment situation of out-of-school Puerto Rican females is also relatively poor, albeit not as bad as for Cuban and black females who are out of school. Finally, out-of-school Mexican-American males and females show very similar unemployment rates (32.6 versus 32.3).

Turning now to students, labor force participation rates among males enrolled in school do not vary much among ethnic subgroups (75.5 to 79.5 percent). For female students, the variation in labor force participation rates across ethnic subgroups is considerably more than for males (67.3 to 77.7 percent) but is much less than the ranges for high school dropouts of either sex (males: 70.2 to 90.1 percent; females: 47.4 to 67.8 percent).

But while rates of labor force participation do not vary much, chances of employment do. Among male students, Puerto Ricans have the highest unemployment rate of any subgroup (27.5 percent). Only black female students have a higher unemployment rate, 32.6 percent. Among male Hispanics, Mexican-Americans have the lowest unemployment rate (14.8 percent), and among female Hispanics, other Latin Americans have the lowest unemployment rate (16.3 percent).

Comparing students to dropouts, no simple pattern emerges for labor force participation rates among males. In some cases, e.g., Mexican-Americans, dropouts have a higher degree of labor force attachment than students (90.1 versus 77.2 percent), but in other cases, such as Cuban males, students have a higher level of labor force involvement than dropouts (75.5 versus 70.2 percent). However, the unemployment statistics for males show a clear-cut pattern: once in the labor force, high school dropouts have a more difficult time finding work than youths who remain in school. This pattern could reflect employers' responses to dropouts' relative lack of education. An alternative explanation for this pattern is that high school students and dropouts seek different kinds of jobs. For example, high school students largely seek part-time employment (Lewin-Epstein, 1981), while dropouts are more likely to look for full-time work (Borus, 1983). Differences in unemployment rates may simply reflect differences in the job markets in which students and dropouts search for work. Youths who are looking for full-time work may be more disadvantaged than youths searching for part-time jobs because those who seek full-time employment are likely to be competing with adult workers who have considerable labor force experience. In contrast, the job market for part-time work is likely to be less competitive.

Considering the statistics for females, the pattern is clear across all subgroups: dropouts are less involved in the work force than students. Part of this pattern may be due to a discouraged worker effect. Because female dropouts have relatively poor employment prospects, as evidenced by their very high unemployment rates, females

TABLE 2 Labor Force Status, by School Enrollment Status, Sex, and Population Subgroup, for Sophomore Cohort

Population Subgroup	Not Enrolled in School								
	Labor Force Participation			Unemployment			Military Enlistment		
	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size
					Male				
All Hispanics	85.0	4.2	189	30.0	5.8	160	3.1	2.0	195
Mexican-American	90.1	4.4	119	32.6	7.4	105	0.6	1.1	121
Cuban	70.2	19.0	15	33.9	23.0	11	0.0	0.0	15
Puerto Rican	73.7	13.9	26	34.7	17.1	20	14.4	10.5	29
Other Latin American	82.5	11.4	29	18.7	13.4	22	2.7	4.8	30
Non-Hispanic blacks	73.1	6.2	134	36.8	7.8	99	1.4	1.6	137
Non-Hispanic whites	82.5	2.8	508	21.8	3.3	449	8.4	2.0	556
					Female				
All Hispanics	59.5	5.4	212	34.9	6.8	126	0.0	0.0	212
Mexican-American	57.6	7.1	126	32.3	8.9	71	0.0	0.0	126
Cuban	47.4	16.8	23	52.5	20.8	15	0.0	0.0	23
Puerto Rican	67.8	14.0	29	46.2	18.4	19	0.0	0.0	29
Other Latin American	63.5	13.3	34	27.6	15.7	21	0.0	0.0	34
Non-Hispanic blacks	60.4	7.0	128	47.4	8.7	85	2.9	2.4	130
Non-Hispanic whites	66.0	3.4	552	26.6	3.9	354	0.9	0.7	556

BEST COPY AVAILABLE

TABLE 2 (continued)

Population Subgroup	Enrolled in School					
	Labor Force Participation			Unemployment		
	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size
	Male					
All Hispanics	77.1	1.7	1,567	18.0	1.8	1,180
Mexican-American	77.2	2.3	872	14.8	2.2	649
Cuban	75.5	6.0	132	22.4	6.8	97
Puerto Rican	76.0	5.5	159	27.5	6.7	117
Other Latin American	77.7	3.3	404	18.4	3.5	317
Non-Hispanic blacks	75.7	2.1	1,089	24.8	2.5	804
Non-Hispanic whites	79.5	0.8	7,415	14.4	0.8	5,831
	Female					
All Hispanics	72.7	1.8	1,657	19.7	1.9	1,141
Mexican-American	71.3	2.4	935	21.5	2.6	642
Cuban	67.3	6.2	147	20.7	6.8	91
Puerto Rican	72.1	5.6	169	22.9	6.2	118
Other Latin American	75.6	3.4	406	16.3	3.5	290
Non-Hispanic blacks	67.8	2.0	1,451	32.6	2.4	1,009
Non-Hispanic whites	77.7	0.8	7,987	14.8	0.8	6,179

BEST COPY AVAILABLE

choose to stay out of the labor force. A second explanation for this pattern is related to the reasons they left school in the first place. Since many females dropped out because they were pregnant or getting married (see Borus, 1983), it is reasonable to expect that many of them chose the role of homemaker; therefore, they are not counted in traditional definitions of labor force participation.

Seniors

High School and Beyond also followed up, two years later, on respondents who were seniors in 1980. Table 3 describes the seniors' postsecondary school activities by sex and population subgroup.

Hispanics are underrepresented in postsecondary education relative to their share of the population (National Center for Education Statistics, 1980:Table 3.01). However, Hispanics who have graduated from high school have been found to go on to college at a rate equal to (Peng, 1977; Duran, 1983) or higher (Fligstein and Fernandez, 1982, 1984) than non-Hispanic whites. Peng (1977) speculates that this pattern is due to the success of affirmative action programs. Nielsen (1980), however, offers the intriguing interpretation that this pattern is actually a consequence of the significant barriers to Hispanic achievement in high school. Because high school is a difficult process for Hispanics (evidenced by their very high dropout rates; see Table 2), the "survivors" of the process, he argues, are a more select and highly motivated group than whites who do not encounter the same obstacles in high school.

Regardless of which of these interpretations is correct, past research shows that Hispanics compare favorably with other groups in their ability to gain access to higher education once they make it through high school. Olivas (1979), however, thinks that the equivalence of college-going rates is due to the tendency for Hispanics disproportionately to attend junior and two-year community colleges. Olivas (1981) and others (e.g., Duran, 1983) argue that this is because Hispanic high school graduates are relatively poorer than their non-Hispanic counterparts and, thus, are less able to afford four-year colleges.

The data reported in Table 3 do not support these past results. Both male and female Hispanic high school graduates are less likely to go on to college than whites. These Hispanic-white differences in rates of postsecondary attendance are mainly due to Hispanic underrepresentation in four-year institutions.

Because of the small sample sizes, the standard errors for the Hispanic subgroups are very large, which makes inferences for the Hispanic subgroups difficult. However, the following patterns emerge among the subgroups. The percentage not attending postsecondary school is particularly high for Puerto Rican males (57.8 percent), but is also large for Mexican-Americans and other Latin Americans. Only Cuban males have a higher rate of postsecondary attendance than whites (82.7 versus 62.2 percent).

TABLE 3 Postsecondary Attendance, by Sex and Population Subgroup, for Senior Cohort

Population Subgroup	Four-year College			Two-year College			Vocational School			No Postsecondary School		
	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size
							Male					
All Hispanics	23.9	4.6	297	22.6	4.6	284	8.5	6.6	61	45.1	4.5	409
Mexican-American	19.8	5.9	154	25.6	6.1	176	7.8	8.2	36	46.9	5.6	266
Cuban	44.8	14.5	40	34.3	13.0	45	3.6	17.1	4	17.3	20.1	12
Puerto Rican	24.8	15.3	27	11.7	19.7	9	5.7	21.3	4	57.8	14.0	42
Other Latin American	26.4	9.3	76	18.3	9.7	54	10.8	13.9	17	44.5	9.7	89
Non-Hispanic blacks	30.9	3.8	397	18.3	4.5	203	6.1	4.6	73	44.7	3.6	515
Non-Hispanic whites	34.9	2.1	962	21.9	2.3	575	5.4	2.5	154	37.8	2.2	894
							Female					
All Hispanics	19.1	4.0	320	28.2	4.3	379	9.7	5.4	102	43.0	4.2	470
Mexican-American	15.7	5.3	158	14.5	4.4	217	4.8	5.2	58	47.1	5.3	306
Cuban	19.2	11.5	40	35.5	10.9	65	11.7	19.7	9	33.6	16.7	27
Puerto Rican	24.3	11.5	47	21.0	15.0	25	7.5	15.3	10	47.3	13.4	47
Other Latin American	22.4	8.9	75	29.6	9.9	72	10.8	11.4	25	37.2	9.4	90
Non-Hispanic blacks	33.9	3.3	553	20.8	3.8	300	10.9	3.9	170	34.5	3.4	532
Non-Hispanic whites	36.4	2.0	1,086	24.4	2.2	685	7.6	2.5	209	31.6	2.2	820

BEST COPY AVAILABLE

Although I cannot resolve the issue here, it is my speculation that the results reported differ from those of past research because of differences in sample design. Unlike the data reported in most other studies, High School and Beyond is a longitudinal study of a grade-based cohort of students, i.e., seniors in 1980.[6] Other studies report percentages of high school graduates in household surveys (e.g., the Current Population Surveys; see Duran, 1983:Table 1) who go on to college. Sometimes an age restriction is used to define the survey population, but it is typically a broad range; for example, Duran (1983) uses the population aged 18-34. If, by being poorer than whites, Hispanics are more likely to have discontinuities in their educational careers and therefore to take longer to make the transition to college,[7] college-going rates based on studies of grade cohorts, such as in High School and Beyond, will show Hispanics lagging in their rates of college-going. If it is the case that Hispanics go on to college at rates equal to or higher than whites but that it takes longer for them to do so, studies of broad age cohorts, such as Duran's (1983), that do not examine the question of whether Hispanics are overage compared with whites will show that Hispanics have reached parity with whites. If the discrepancy between these results based on High School and Beyond and those based on other studies is due to Hispanics' taking longer to get to college, then the discrepancy should diminish as the High School and Beyond cohort ages.

Table 4 shows seniors' labor force status by postsecondary school attendance, sex, and population subgroup. Here, too, the small sample sizes make inferences concerning the Hispanic subgroups difficult, and caution should be exercised in interpreting differences among the Hispanic subgroups. Similar to the results for the sophomores, Puerto Rican males have a high rate of military enlistment two years after high school graduation (23.6 percent). Black males also have a high military enlistment rate (19.1 percent). Although much lower in absolute size than the rate for Puerto Rican males, the corresponding rate for Puerto Rican females is also high relative to white females (5.2 versus 2.3 percent). The military enlistment rate among black females is similar to that of white females (2.2 versus 2.3 percent).

Considering the labor force participation of males who are not enrolled in school, rates of participation in the labor force are very high (greater than 90 percent) and do not vary much across ethnic subgroup. Overall, Hispanic males participate in the labor force more than either whites or blacks (95.7 compared with 92.9 and 92 percent, respectively). Almost all civilian out-of-school Puerto Rican males are either working or seeking employment (98.8 percent). Mexican-American males also have a very high labor force participation rate, 96.6 percent.

---

[6] Peng (1977) is an exception here. His results are based on the Class of 1972 National Longitudinal Study.

[7] For evidence that family socioeconomic status is inversely related to school discontinuities in the general population, see Featherman and Carter (1976). For evidence on socioeconomic status and the timing of educational transitions, see Hogan (1981).

Although not as high as the rates for males, the labor force participation rates of out-of-school females are fairly high. However, unlike the males, there is considerable variation across ethnic subgroup in the rates for females. Female Hispanics participate in the labor force at a rate that is almost equal to that of white females (83.3 versus 84.4 percent), but is somewhat higher than the rate for black females (78.2 percent). Cuban females are substantially more likely to participate in the labor force than white females: almost 95 percent of out-of-school civilian Cuban females were employed or looking for work, compared with 84.4 percent for white females. Puerto Rican females, who showed the highest labor force participation rate among out-of-school sophomores, had a relatively low rate of participation, i.e., 79.7 percent when followed up two years later.

Turning to the unemployment rates for out-of-school males, Hispanics overall have an unemployment rate that is slightly higher than that of whites (18 compared with 14.8 percent), but substantially lower than that of blacks (29.3 percent). Among male Hispanic subgroups, Puerto Ricans have the highest and Cubans the lowest unemployment rates (19.5 and 14.1 percent, respectively).

Among out-of-school females, Hispanics' employment prospects are much poorer than those of whites, but not as poor as those of blacks. More than 40 percent of black females are unemployed, compared with 17.8 and 27.7 percent of white and Hispanic females, respectively. Among Hispanic subgroups, Cuban females have the highest rate of unemployment (40.5 percent)--the highest unemployment rate in Table 4. Because of their small sample size, statistics for the Cubans should be interpreted with caution.

Looking at those who are enrolled in postsecondary education, labor force participation rates are very low. Among males, only 44.5 percent of whites, 38.8 percent of blacks, and 52.2 percent of Hispanics are employed or seeking work while attending postsecondary education. For both sexes, Mexican-Americans have the highest rates of labor force participation (males: 59.9 percent; females: 58.6 percent). Puerto Ricans of both sexes show the lowest labor force participation rates among Hispanic subgroups: 39.9 percent for males and 54.2 percent for females.

Unemployment rates for youth enrolled in postsecondary education follow the same pattern found for the other populations: the unemployment rate for Hispanics is higher than that for whites and lower than that for blacks. Consistent with the results for other populations, Puerto Ricans show the highest unemployment rate among male Hispanics (27.6 percent). Among female Hispanics, Mexican-Americans show the highest rate of unemployment (15.7) percent.

Finally, comparison of the labor force status of seniors (Table 4) with that of sophomores (Table 2) reveals a number of interesting patterns. For one, a comparison of high school dropouts with seniors who have not gone on to college shows that the seniors have uniformly higher labor force participation rates and uniformly lower unemployment

TABLE 4 Labor Force Status, by Postsecondary School Attendance, Sex, and Population Subgroup, for Senior Cohort

Population Subgroup	Not Enrolled in Postsecondary School								
	Labor Force Participation			Unemployment			Military Enlistment		
	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size
	Male								
All Hispanics	95.7	1.8	451	18.0	3.4	428	8.7	2.3	528
Mexican-American	96.6	1.9	303	17.2	4.1	287	9.4	3.4	254
Cuban	90.2	12.9	18	14.1	16.0	16	9.0	11.5	21
Puerto Rican	98.8	3.8	28	19.5	14.0	27	23.6	12.5	39
Other Latin American	94.4	4.2	102	19.2	7.3	98	5.3	3.9	114
Non-Hispanic blacks	92.0	2.1	468	29.3	3.6	428	19.1	2.7	585
Non-Hispanic whites	92.9	1.1	952	14.8	1.6	888	12.2	1.3	1,094
	Female								
All Hispanics	83.3	2.7	645	27.7	3.6	534	0.7	0.6	654
Mexican-American	87.4	3.0	419	27.1	4.4	350	0.3	0.5	422
Cuban	94.8	6.5	40	40.5	15.1	36	0.0	0.0	40
Puerto Rican	79.7	9.3	63	25.1	11.4	49	5.2	5.0	67
Other Latin American	75.2	7.2	123	27.7	8.3	99	0.2	0.7	125
Non-Hispanic blacks	78.2	2.5	726	40.2	3.4	567	2.2	0.9	744
Non-Hispanic whites	84.4	1.4	1,201	17.8	1.6	999	2.3	0.6	1,227

BEST COPY AVAILABLE

TABLE 4 (continued)

Population Subgroup	Enrolled in Postsecondary School					
	Labor Force Participation			Unemployment		
	Percent	Standard Error	Sample Size	Percent	Standard Error	Sample Size
	Male					
All Hispanics	52.2	4.4	430	19.9	4.9	229
Mexican-American	59.9	6.1	223	15.4	6.0	122
Cuban	44.8	10.7	73	16.9	10.9	40
Puerto Rican	39.9	16.2	31	27.6	23.7	12
Other Latin American	47.7	9.1	103	26.3	10.9	55
Non-Hispanic blacks	38.8	3.9	415	23.6	5.4	165
Non-Hispanic whites	44.5	1.9	1,279	14.6	2.0	569
	Female					
All Hispanics	56.7	3.9	540	13.3	3.4	330
Mexican-American	58.6	5.5	276	15.7	5.0	178
Cuban	56.5	9.4	94	0.0	0.0	61
Puerto Rican	54.2	13.2	48	8.4	9.8	27
Other Latin American	55.3	8.3	122	14.3	8.1	64
Non-Hispanic blacks	44.5	3.2	664	23.8	4.1	293
Non-Hispanic whites	49.1	1.8	1,372	12.1	1.6	719

rates. This is not surprising given that youths in the senior cohort are older than youths in the sophomore cohort (on average, 19 versus 17) and are high school graduates rather than high school dropouts. But if we consider youths who are in school from both cohorts, the pattern for labor force participation reverses. Students in high school (sophomores) have much higher rates of labor force participation than students in postsecondary schools. However, among those in school and participating in the labor force, the chances of employment are not systematically different for members of the sophomore and senior cohorts.

These patterns imply that high school students are much more attached to the labor force than students enrolled in postsecondary schools. There are two possible explanations for these patterns: (1) postsecondary study allows fewer opportunities for labor force involvement, and (2) self-selection is operating so that students who attend postsecondary education are the ones who wish to concentrate on their schooling. These results may be due to the need of Hispanics to participate in the labor force more than whites because Hispanics are poorer and are less able to afford the costs of postsecondary education. But, perhaps because of self-selection, Hispanic high school students participate in the labor force at higher rates than postsecondary students.

Comparisons of youth who are out of school from both cohorts suggest that caution should be exercised when interpreting the causal analyses of seniors' labor force status (presented in the next section). Unlike the sophomore cohort, the senior cohort does not include high school dropouts. Thus, the causal analyses that follow are subject to selection bias (Heckman, 1979). This problem is compounded by the fact that the various population subgroups have markedly different selection rates due to dropping out (see Table 2). The data for the sophomore cohort are not subject to this problem, because pre-sophomore year attrition rates are small and do not vary for Hispanics and non-Hispanics (Rumberger, 1983:Table 1).

MULTIVARIATE ANALYSES

Analysis Strategy

In this section, I develop models of labor force participation and employment for whites and Hispanics.[8] The purpose is to test a number of hypotheses derived from the literature concerning the causes of Hispanics' underachievement in the labor market. Specifically, the purpose is to test whether Hispanic-white differences in general background factors, such as family income or scholastic achievement, account for Hispanics' difficulties, or whether specific factors that differentiate Hispanics from the white majority, such as language or recency of migration, explain these difficulties.

---

[8] Note that I do not estimate models for blacks. This is for two reasons. First, the logistic regression analyses presented in this section are estimated by maximum likelihood techniques and are therefore very expensive. Eliminating blacks from consideration has the advantage of simplifying the number of comparisons that must be made in the analysis and cuts computation time by a third. Second, a major focus of this analysis is the assessment of the effects of

My strategy is to first specify separate models of labor force participation[9] for white and Hispanic sophomores and seniors. Because of the small numbers of Cubans and Puerto Ricans in the sample, the various Hispanic subgroups have been aggregated and dummy variables have been included to distinguish subgroup membership. Although it would have been preferable to explore subgroup interactions with respect to the models developed here, my preliminary analysis has shown that the numbers of Cubans and Puerto Ricans are very small and therefore likely to yield unreliable estimates.

Because there is evidence that decisions about school continuation and labor force participation are interrelated (Duncan, 1965; Edwards, 1976; Ornstein, 1976), I treat labor force participation and school enrollment status as joint dependent variables.[10] Therefore, the dependent variable has four categories: in the labor force and in school, in the labor force and out of school, out of the labor force and in school, and out of the labor force and out of school. Three dummy varibles are created for membership in these four categories. They are labeled LFP1, LFP2, and LFP3 and correspond to the first three categories above. The excluded (base) category is out of the labor force and out of school. Each of these three dummy variables is

---

linguistic patterns on labor force and school enrollment status. Although there is evidence that linguistic factors are important in determining black students' school achievement (see Dillard, 1973:Ch. 7; Harber and Bryen, 1976; Labov, 1976), the literature focuses on the use of nonstandard English dialects, i.e., "Black English." Since the language data in High School and Beyond does not contain any information about dialects, but is geared toward the identification of foreign-language users, the language issue for blacks cannot be properly addressed.

[9] As with the descriptive analyses, those who are enlisted in the military are defined as being out of the labor force. Therefore, the equations presented predict participation in the civilian labor force.

[10] An alternative here would be to use school enrollment status as a predictor of labor force status. However, if it is true that decisions about school continuation and labor force participation are made jointly, the results of such a specification would suffer from simultaneity bias (Theil, 1971:429-432).

predicted by means of logistic regression analysis.[11] The coefficients estimated from these models represent the effects of independent variables on the probability (log-odds) of being in a particular labor force-school enrollment status (i.e., LFP1, LFP2, LFP3) as opposed to being in the base category (i.e., out of the labor force and out of school).

The next step is to specify models for employment versus unemployment for whites and Hispanics in both cohorts. Parallel to labor force participation, employment and school enrollment are treated as jointly determined variables. The dependent variable has four categories: employed and in school (labeled EMP1), employed and out of school (EMP2), unemployed and in school (EMP3), and unemployed and out of school (the base category). A set of logistic regressions is then run to predict membership in the first three employment-school enrollment statuses (i.e., EMP1, EMP2, and EMP3). Because employment is defined only for those who participate in the labor force, the estimates derived from the logistic regressions for employment are conditional on participation in the labor force.

Results

Tables 5 and 6 show the number of cases used in the analysis and the means and standard deviations of the independent variables for labor force participation and employment models for white and Hispanic sophomores and seniors.

The data in Table 5 confirm a number of findings of past research (see above). Hispanic youths tend to come from poorer families than white youths. Hispanics show a shorter length of U.S. residence on all three length-of-residence variables. Hispanics are also much more likely to be bilingual and, among bilinguals, to report a greater facility with the non-English language (i.e., Spanish) than whites. Hispanics also do poorly in school relative to whites: they have lower grades and score less well on standardized tests. These patterns are the same for both the sophomore and senior cohorts. These results are also similar for those respondents who are in the labor force (Table 6).

Labor Force Participation of Sophomores

Table 7 presents the results of the logistic regression analyses for white and Hispanic sophomores' labor force participation-school enrollment. For both Hispanics and whites, only one sex effect

---

[11] Because the dependent variables are dichotomous, ordinary least squares regressions would produce estimates that are not minimum variance unbiased estimates because of heteroskedasticity. A logit specification solves this problem (see Theil, 1971:631-633).

TABLE 5 Means and Standard Deviations for Variables in Labor Force Participation-School Enrollment Analysis

	Sophomores				Seniors			
	White		Hispanic		White		Hispanic	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
LFP1	.73	.44	.65	.48	.25	.43	.28	.45
LFP2	.04	.20	.07	.26	.36	.48	.42	.49
LFP3	.21	.41	.26	.44	.30	.46	.21	.41
Sex (1=male)	.47	.50	.48	.50	.46	.50	.44	.50
Age	15.47	.59	15.62	.74	17.43	.57	17.57	.69
Mexican American	-	-	.53	.50	-	-	-	-
Cuban	-	-	.10	.30	-	-	.12	.33
Puerto Rican	-	-	.10	.30	-	-	.08	.27
Other Latin American	-	-	.27	.44	-	-	.23	.42
Bilingual (1=yes)	.04	.20	.51	.50	-	-	.63	.48
Proficiency in non-English Language	.06	.35	1.04	1.12	.07	.36	1.34	1.15
Vocabulary Test Score	50.62	9.36	45.52	9.15	55.18	9.47	49.23	9.76
Composite Test Score	53.02	8.42	46.49	7.94	52.90	8.23	46.60	7.94
Grade Point Average	2.84	.78	2.63	.76	3.02	.70	2.80	.69
Marital Status	.03	.17	.04	.20	.11	.31	.13	.34
Worked During Base Year	.45	.50	.34	.47	.64	.48	.58	.49
Length of Residence	15.31	1.20	14.86	2.43	17.27	1.26	16.41	3.13
Father's Length of Residence	41.68	5.20	35.69	11.77	43.86	4.92	35.95	12.93
Mother's Length of Residence	38.88	4.69	33.18	10.94	40.85	4.93	33.50	12.10
Socioeconomic Status	.12	.69	-.36	.72	.04	.71	-.50	.74
	(N=3,389)		(N=2,211)		(N=4,340)		(N=1,623)	

surfaces in Table 7: males are significantly more likely than females to be in the labor force and enrolled in school.

Considering the other demographic variables, the results for age are as expected: older youths are more involved in the labor force and less involved in school. Among Hispanics, older youths are more likely to be in the labor force and out of school (see equation for LFP2) and are less likely to be in school and out of the labor force (equation LFP3) than out of the labor force and out of school.

The results for whites follow a similar pattern, although one effect is statistically significant, i.e., the effect of age in the

BEST COPY AVAILABLE

TABLE 6 Means and Standard Deviations for Variables in Employment Status-School Enrollment Analysis

	Sophomores				Seniors			
	White		Hispanic		White		Hispanic	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
EMP1	.80	.40	.72	.45	.36	.48	.35	.48
EMP2	.04	.20	.07	.26	.49	.50	.48	.50
EMP3	.14	.35	.19	.39	.05	.22	.05	.22
Sex (1=male)	.48	.50	.50	.50	.45	.50	.43	.50
Age	15.48	.59	15.65	.75	17.42	.56	17.57	.70
Mexican American	-	-	.52	.50	-	-	.60	.50
Cuban	-	-	.09	.29	-	-	.12	.33
Puerto Rican	-	-	.10	.30	-	-	.07	.26
Other Latin American	-	-	.29	.45	-	-	.22	[illegible]
Bilingual (1=yes)	.04	.20	.50	.50	.04	.20	.62	.49
Proficiency in non-English Language	.06	.33	1.02	1.12	.07	.35	1.31	1.14
Vocabulary Test Score	50.55	9.23	45.25	8.98	53.89	9.44	48.22	9.34
Composite Test Score	52.90	8.20	46.31	7.84	51.50	8.13	45.85	7.58
Grade Point Average	2.82	.77	2.61	.75	2.92	.70	2.75	.68
Marital Status	.02	.14	.03	.17	.13	.34	.12	.33
Worked During Base Year	.50	.50	.40	.49	.70	.46	.62	.49
Length of Residence	15.34	1.13	14.88	2.42	17.29	1.12	16.44	3.07
Father's Length of Residence	41.75	5.02	36.06	11.64	43.86	4.91	36.14	12.93
Mother's Length of Residence	38.93	4.56	33.37	10.90	40.84	5.00	33.65	12.15
Socioeconomic Status	.12	.67	-.35	.71	-.07	.66	-.55	.71
	(N=2,613)		(N=1,580)		(N=2,664)		(N=1,127)	

equation for LFP1: younger white youths are more likely to be in the labor force and in school than in any of the other categories.

The independent effects of marital status on labor force participation and school enrollment are similar for whites and Hispanics, even for this very young group. For both whites and Hispanics, having been married decreases the chances of being in the labor force and in school and increases the odds of being in the labor force and out of school as opposed to being in either of the out-of-the-labor-force categories (i.e., the base category and LFP3). For both whites and Hispanics, married people find it particularly difficult to participate in both school and the labor force.

BEST COPY AVAILABLE

TABLE 7 Effects of Independent Variables on Labor Force Participation-School Enrollment Status for White and Hispanic Sophomores

Independent Variables	White						Hispanic					
	LFP1		LFP2		LFP3		LFP1		LFP2		LFP3	
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
Sex (1=male)	.02	.04	.20*	.10	-.06	.05	.06	.05	.23*	.10	-.07	.05
Age	-.19*	.08	.40	.24	-.12	.09	-.10	.07	.61*	.11	-.29*	.08
Cuban	--	--	--	--	--	--	.25*	.09	-.59*	.22	-.13	.10
Puerto Rican	--	--	--	--	--	--	-.02	.12	.07	.22	-.04	.13
Other Latin American	--	--	--	--	--	--	-.11	.13	.42	.25	.08	.14
Bilingual (1=yes)	-.05	.23	.89*	.40	-.34	.27	-.10	.11	.26	.20	-.07	.12
Proficiency in non-English Language	-.21	.25	-.46*	.54	.43	.29	.09	.10	-.12	.18	.02	.11
Vocabulary Test Score	.01	.01	-.02	.02	-.01	.01	-.01	.01	.01	.02	.01	.01
Composite Test Score	-.02	.01	-.03	.02	.01	.01	.01	.01	-.04*	.02	.002	.01
Grade Point Average	.08	.06	-1.04*	.14	.25*	.07	.17*	.07	-.85*	.13	.24*	.08
Marital Status	-1.08*	.13	.79*	.16	.08	.13	-.72*	.13	.77*	.15	-.47*	.17
Worked During Base Year	.34*	.04	.23*	.09	-.45*	.05	.32*	.05	.13	.09	-.45*	.06
Length of Residence	.02	.05	.21	.20	-.01	.05	-.001	.03	-.02	.05	.02	.03
Father's Length of Residence	.01	.01	-.02	.02	-.01	.01	.01*	.01	.003	.01	-.01	.01
Mother's Length of Residence	-.02	.01	.04	.03	.002	.01	-.01	.01	.003	.02	.01	.01
Socioeconomic Status	.05*	.06	-.52*	.16	.03*	.07	.06	.07	-.02*	.14	-.05*	.08
Constant	2.36	1.26	-6.87*	2.54	-.17	1.40	1.21	1.11	-7.80*	1.85	1.51	1.31
Log Likelihood	(-1890.39)		(-465.07)		(-1688.53)		(-1375.59)		(-462.90)		(-1193.78)	

* P≤.05.

BEST COPY AVAILABLE

The scholastic achievement variables show significant effects for both whites and Hispanics. For Hispanics, the higher the base-year grade-point average, the greater the probability of being in school and out of the labor force and the lower the chances of being in the labor force and out of school (see equations for LFP2 and LFP3). This same pattern surfaces for whites as well, but the t-test for the coefficient in the equation for LFP1 fails significance. Performance on the battery of standardized tests is not related to labor force participation or school enrollment once the other predictors in the model are controlled. The equation for Hispanics predicting LFP2 is an exception: better performance on the test battery lowers the chances of being out of school and in the labor force.

The lack of significant effects for the composite test score suggests that between-school variation in scholastic achievement is largely irrelevant to dropout and labor force decisions.[12] The significant effects of grade-point average, which only vary within schools, strongly suggest that the effects of scholastic achievement on dropout and labor force participation decisions are highly contextual. It is only students' scholastic achievement relative to others in their school context that affects their decisions to leave school and/or participate in the labor force.

The last of the general variables, i.e., previous work experience, has similar effects on labor force participation and school enrollment for Hispanics and whites. Those respondents who worked at the time of the base-year survey are less likely to be exclusively in school (see the equations for LFP2), although the effect for Hispanics fails to be significant. Previous work experience also increases the chances that both whites and Hispanics combine school and labor force activities (LFP1) and decreases their chances of being out of school and in the labor force (LFP3). Therefore, unlike previous studies that find that high school students who work suffer significant costs in terms of their schooling (Steinberg et al., 1982b), these data show no tendency for either Hispanics or whites to be pulled out of school and into the labor force by virtue of having worked during their sophomore year.

Considering the effects of specific factors on youths' labor force participation and school enrollment, none of the length-of-U.S.-residence variables (i.e., mother's, father's, respondent's) significantly distinguishes among the four categories of the dependent variable. The only exception is the coefficient for father's length of residence in the equation for LFP1 for Hispanics: respondents whose father have been in the United States longer are more likely to be in the labor force and in school.

---

[12] Recall that test performance varies both between and within schools, while grade-point average only varies within school. Because grade-point average is controlled in these models, test score performance largely taps the effects of between-school variation in scholastic achievement.

In terms of the effects of the language variables, exposure of Hispanics to Spanish during their upbringing does not significantly predict school continuation or labor force participation. Although compared with Hispanics relatively few whites had been exposed to another language (see Table 7), exposure of whites to a non-English language raises the probability of their being in the labor force and out of school.

Contrary to expectations, none of the language variables significantly distinguishes among the four categories of the dependent variable for Hispanics. Why the effect of non-English-language background appears for whites but not for Hispanics is unclear.

Last among the language variables, the effects of the measure of English-language proficiency (vocabulary test score) on labor force participation and school continuation are nil for both Hispanics and whites. This is most likely because the main effects of English-language proficiency for these youth are probably through scholastic achievement (see Nielsen and Fernandez, 1982), which has been controlled in these models.

Finally, the dummy variables for Hispanic subgroup show only one effect. After the other variables in the model are controlled, Cubans are more likely to combine school and labor force activities and are less likely to be in the labor force and out of school than any of the other Hispanic subgroups.

The lack of significant effects for the dummy variables for Hispanic subgroup implies that the other variables in the model have explained the subgroup variation in school continuation and labor force participation. Most important among the variables that have been found to account for differences in achievement among Hispanic subgroups is family socioeconomic background. For example, the relative affluence of the Cubans (see Jorge and Moncanz, 1980) is often cited as a major reason for Cubans' greater success in school and the labor market (see Nielsen and Fernandez, 1982).[13] However, other variables also explain the dependent variables, and consequently, differences among Hispanic subgroups in labor force participation and school enrollment are the same ones that are important for whites, i.e., scholastic achievement, previous work experience, and marital status. According to these results, the processes by which Hispanics and whites decide to stay in or leave school and participate or not participate in the labor force are very similar. The "specific" variables that I hypothesized would be necessary to explain Hispanics' underachievement have proven to be insignificant.

---

[13] Note that the latest wave of Cuban immigrants, the Mariel refugees, are not as affluent as early waves (see Bach, 1980). However, these data do not contain any of these refugees because the High School and Beyond sample was drawn prior to the Mariel boat lift.

Employment of Sophomores

Table 8 shows the coefficients of models predicting employment and school enrollment as joint dependent variables for sophomores. Similar to the results for labor force participation, sex does not significantly distinguish among the categories of the dependent variable. Considering the other demographic variables, age is a significant predictor in two equations, i.e., EMP1 and EMP2 for Hispanics. Older Hispanics are less likely to be employed and in school and more likely to be employed and out of school than younger Hispanics.

Similar to the pattern for labor force participation, marital status is a strong predictor of employment and school continuation for both whites and Hispanics, independent of the other variables in the model. Being married increases the chances that the respondent is employed and out of school and lowers the probability of being employed and in school for both whites and Hispanics. These results imply that both whites and Hispanics are more likely to be unemployed and out of school or unemployed and in school than being in school and employed. Apparently, employment and schooling are an either-or proposition for those whites and Hispanics who are married.

Looking at family socioeconomic background, socioeconomic status is not a significant predictor for either whites or Hispanics. The fact that the effects of family socioeconomic background are weaker for employment than for labor force participation for whites is not surprising. Family socioeconomic background may make it more-or-less desirable to seek employment, but actually securing a job involves convincing an employer that one is worth hiring. Especially in the youth labor market, family background is unlikely to be an important market signal to employers (see Spence, 1974).[14] Although the low-wage, low-skill, high-turnover structure of the youth job market (see Osterman, 1980; Borus, 1983) is likely to make employers' hiring decisions less dependent on productivity-related criteria, employers are probably more likely to pay attention to the effects of past work experience and the characteristics measured by the second set of general predictors, i.e., scholastic achievement.

Similar to the pattern of results for labor force participation, past work experience increases the chances of being in the two employed categories (i.e., EMP1 and EMP2) and lowers the probability of being unemployed and in school (EMP3). This pattern is similar for both

---

[14] Osterman (1980) shows data to support the argument that parents are crucial in helping many youths get started in the job market by providing youths with networks of personal contacts that help them find jobs. The effects of such job contacts on youths' probability of employment is certain to be positive, but this process is probably only marginally related to these family background factors. Such network variables may account for the significance of mother's and father's presence in the home in increasing youths' labor force participation and employment.

TABLE 8 Effects of Independent Variables on Employment Status-School Enrollment Status for White and Hispanic Sophomores

Independent Variables	White						Hispanic					
	EMP1		EMP2		EMP3		EMP1		EMP2		EMP3	
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
Sex (1=male)	.04	.05	.14	.12	-.11	.06	-.02	.06	.15	.11	-.03	.07
Age	-.19	.11	.45	.32	-.13	.13	-.29*	.08	.57*	.12	-.07	.10
Cuban	--	--	--	--	--	--	.23	.12	-.44	.25	-.01	.13
Puerto Rican	--	--	--	--	--	--	-.20	.15	-.15	.28	.22	.16
Other Latin American	--	--	--	--	--	--	-.02	.17	.35	.30	-.11	.19
Bilingual (1=yes)	-.001	.31	.95*	.47	-.78	.48	-.08	.14	.27	.23	-.06	.16
Proficiency in non-English Language	-.01	.37	-.53	.61	.55	.50	.01	.12	-.10	.21	.08	.14
Vocabulary Test Score	.0003	.01	-.03	.02	.01	.01	-.01	.01	.01	.02	.01	.01
Composite Test Score	.001	.01	-.03	.02	.002	.01	.03*	.01	-.03	.02	-.02	.01
Grade Point Average	.32*	.08	-.94*	.16	.05	.09	.40*	.09	-.79*	.15	.02	.10
Marital Status	-.84*	.16	1.38*	.21	-.26	.27	-.67*	.16	1.07*	.19	-.25	.23
Worked During Base Year	.29*	.05	.22*	.11	-.43*	.06	.37*	.06	.11	.11	-.50*	.08
Length of Residence	-.04	.07	.29	.28	-.01	.08	.0001	.03	-.03	.05	.01	.04
Father's Length of Residence	.01	.01	-.02	.02	-.004	.02	.01	.01	-.0003	.01	-.01	.01
Mother's Length of Residence	-.01	.02	.03	.03	-.01	.02	.001	.01	-.006	.02	-.003	.01
Socioeconomic Status	.08	.08	-.28	.18	.07	.09	-.003	.09	.02	.17	.02	.10
Constant	3.14*	1.58	-7.78*	2.96	-1.11	1.93	2.83*	1.39	-6.88*	2.15	-.13	1.63
Log-Likelihood	(-1254.47)		(-348.53)		(-1035.52)		(-887.70)		(-335.01)		(-729.08)	

* p≤.05.

BEST COPY AVAILABLE

whites and Hispanics, although the coefficient in the EMP2 equation is not significant for Hispanics. Here, too, there is no evidence of work experience drawing students out of school.

General scholastic achievement, as measured by performance on the test battery, is unrelated to the dependent variables for whites. For Hispanics, better performance on the tests raises the probability of being employed and in school. The pattern for the test-score coefficient in the other two equations implies that better students are more likely to be in school, but neither of these effects is significant. However, two of the three coefficients for grades are significant for both whites and Hispanics. Higher grades increase the probability of being employed and in school and decrease the chances of being employed and out of school.

The fact that grade-point average is a significant predictor of employment suggests that employment choices are also made within the context of school. But unlike the case with labor force participation, wherein students choose whether to look for work, employment choices also reflect employers' choices among competitors looking for work. Because of the highly local nature of the youth job market (see Borus, 1983), especially for younger youths (see Osterman, 1980), it is possible that employers' hiring decisions are also made with reference to the same school context that students refer to when making their labor force participation decisions. Therefore, while better school performance increases students' school attachment and lowers their probability of labor force participation (see Table 7), employers try to choose the best students from among those who do choose to participate in the labor force--if not for their skills, then simply for their better discipline (for a similar argument regarding education and discipline, see Bowles and Gintis, 1977).

In terms of specific variables, none of those measuring language patterns or immigration history significantly distinguishes the four cells of the dependent variable. The only exception to this pattern is the effect of non-English-language background in the equation for EMP2 for whites. Contrary to my predictions, Hispanics' special circumstances play no role in explaining their school continuation or employment. If these results are to be trusted, this would imply that employers do not find these specific characteristics relevant criteria on which to base their hiring decisions.

Finally, unlike the results for labor force participation, none of the subgroups is significantly different in its employment behavior. Apparently, the advantages that Cubans have in the transition into the labor force do not appear in employment, once the other variables in the model have been controlled.

Labor Force Participation of Seniors

Table 9 shows the results of the logistic regressions predicting labor force participation for members of the senior cohort. As mentioned above, the main differences between the senior and sophomore cohorts are that the seniors are, on average, two years older than the

TABLE 9 Effects of Independent Variables on Labor Force Participation-School Enrollment Status for White and Hispanic Seniors

Independent Variables	White						Hispanic					
	LFP1		LFP2		LFP3		LFP1		LFP2		LFP3	
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
Sex (1=male)	-.08*	.04	-.03	.04	.11*	.04	-.14*	.06	.02	.06	.04	.07
Age	-.24*	.08	-.09	.08	.16*	.08	-.28*	.10	.01	.09	.12	.11
Cuban	--	--	--	--	--	--	-.03	.13	.17	.12	-.04	.13
Puerto Rican	--	--	--	--	--	--	-.26	.17	-.30	.17	.40*	.17
Other Latin American	--	--	--	--	--	--	.23	.15	-.15	.17	-.12	.17
Bilingual (1=yes)	-.04	.19	.09	.20	.01	.20	.03	.14	-.07	.13	.01	.16
Proficiency in non-English Language	.43*	.21	-.55*	.25	-.05	.22	.15	.13	-.17	.12	.12	.14
Vocabulary Test Score	.01	.01	-.01	.01	.01	.01	-.02*	.01	-.004	.01	.03*	.01
Composite Test Score	.02	.01	-.05*	.01	.03*	.01	.05*	.01	-.05*	.01	.02	.01
Grade Point Average	.34*	.07	-.69*	.06	.59*	.07	.27*	.10	-.50*	.09	.32*	.11
Marital Status	-.72*	.09	.38*	.06	-.92*	.11	-.75*	.13	.15	.08	-.75*	.17
Worked During Base Year	.24*	.04	.12*	.04	-.28*	.04	.26*	.06	.11*	.06	-.31*	.07
Length of Residence	.11*	.04	-.02	.05	-.03	.04	.02	.03	.0004	.03	-.04	.03
Father's Length of Residence	-.01	.01	.01	.01	-.01	.01	.01	.01	-.01	.01	-.01	.01
Mother's Length of Residence	-.001	.01	-.01	.01	.01	.01	-.03*	.01	.01	.01	.02	.01
Socioeconomic Status	.12*	.05	-.74*	.06	.70*	.05	.14	.09	-.39*	.09	.38*	.10
Constant	-1.33	1.31	6.53*	1.27	-8.06*	1.33	.95	1.83	3.38*	1.59	-6.69*	2.03
Log-Likelihood	(-2311.52)		(-2350.75)		(-2251.11)		(-859.76)		(-959.45)		(-731.59)	

* $p \leq .05$.

BEST COPY AVAILABLE

sophomores (compare Tables 7 and 8) and the seniors are all high school graduates; this means that for seniors, school enrollment refers to participation in postsecondary education at any time in the two years after the base-year survey.

Sex differences in labor force-school enrollment status are stronger for the seniors than the sophomores. Among Hispanics, one effect of sex appears: males are less likely to be in the labor force and in school (LFP1) than females. Two sex differences surface as significant predictors for whites. White males are more likely than white females to be out of the labor force and in school (LFP3) and less likely to be in school and in the labor force.

Considering the effects of the other demographic variables, marital status is a strong predictor of labor force participation and postsecondary school enrollment for both whites and Hispanics. Whites who are married are (in order) most likely to be: (1) in the labor force and out of school (LFP2); (2) out of the labor force and out of school (the base category); (3) in school and in the labor force (LFP1); or (4) out of the labor force and in school (LFP3). For Hispanics, being married clearly affects postsecondary school attendance: Hispanics are most likely to be in the two out-of-school categories (LFP2 and the base category) and least likely to be in the two in-school categories (LFP1 and LFP3).

Similar to the patterns for sophomores' labor force participation, family socioeconomic background is a significant predictor of both white and Hispanic seniors' labor force participation. For both whites and Hispanics, respondents from more affluent families are most likely to be attending postsecondary school and not be in the labor force (LFP3) and are least likely to be in the labor force and out of school (LFP2). Finally, whites from more affluent family backgrounds have higher chances of combining school and labor force participation (LFP1), although this is not as likely an outcome as LFP3.

The results of the scholastic-achievement variables for seniors, in contrast to the results for sophomores, reveal significant effects of both test scores and grades. Test scores are significant here probably because colleges routinely use performance on standardized tests (such as the Scholastic Aptitude Test), which are likely to be correlated with the test battery used in High School and Beyond,[15] as screening devices. It is not surprising, then, that better performance on the standardized tests increases the probability of being exclusively enrolled in postsecondary education for whites, although the corresponding effect for Hispanics fails to be significant (see equations for LFP3). Better test performance also serves to lower the probability of respondents' being out of school and in the labor force for both whites and Hispanics (see the equations for LFP2). But, whereas Hispanics who score well on the standardized tests are more likely to combine school and labor force activity, whites are not (see equations for LFP1).

---

[15] The test battery for High School and Beyond was developed by Educational Testing Service, Princeton, N.J.

Independent of performance on the tests, grades are a strong predictor of school and labor force activities for both whites and Hispanics. Here, too, the effect is probably due to colleges' using grades as an admittance criterion. For both whites and Hispanics, higher grades increase the chances of being in either of the in-school categories (LFP1 and LFP3) and decrease the chances of being in either of the in-labor-force categories.

Last among the general predictors of achievement, previous work experience has strong effects in the expected directions for both Hispanics and whites. For both groups, previous work experience increases the likelihood of being in the labor force regardless of whether respondents are in school.

Considering the effects of the specific variables, among the language variables, proficiency in English (as measured by the vocabulary test) is unrelated to either postsecondary attendance or labor force participation for whites. However, English proficiency does distinguish among some of the categories of the dependent variable for Hispanics. Greater English proficiency lowers the chances of being in the labor force and in school (LFP1) but increases the probability of being in school and out of the labor force (LFP3) for Hispanics.

On the other hand, proficiency in a non-English language shows some effects for whites, but not for Hispanics. Among whites, better non-English language proficiency increases the chances of combining postsecondary education and labor force participation (LFP1) and decreases the probability of being out of school and in the labor force (LFP2).

The length-of-residence variables indicate only two significant effects. Hispanics whose mothers are long-time residents of the United States are less likely to be in school and in the labor force (LFP1). Among whites, respondents who are long-time residents of the United States are more likely to combine labor force participation and postsecondary education (LFP1).

Finally, unlike the pattern in the analyses for the sophomores, the dummy variable for the Puerto Rican subgroup indicates that they are significantly more likely than other Hispanics to be out of the labor force and in school.

Seniors' Employment

Table 10 presents the results of the models of employment and postsecondary enrollment for seniors. As noted above, these estimates are for respondents who are in the labor force and who are high school graduates.

Examining the effects of the demographic variables indicates that there is only one effect of sex (on EMP3 for Hispanics). Among Hispanics, males are significantly more likely to be unemployed and in school than females.

There are two significant effects of age, i.e., predicting EMP1 for white and predicting EMP3 for Hispanics. For whites, older respondents are less likely to be employed while in school. Among Hispanics, older

BEST COPY AVAILABLE

TABLE 10 Effects of Independent Variables on Employment Status-School Enrollment Status for White and Hispanic Seniors

Independent Variables	White						Hispanic					
	EMP1		EMP2		EMP3		EMP1		EMP2		EMP3	
	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)	b	SE(b)
Sex (1=male)	-.02	.05	-.002	.05	.07	.09	-.13	.08	.09	.07	.36*	.16
Age	-.21*	.11	.15	.10	.25	.19	-.12	.12	.24*	.10	-.38	.26
Cuban	--	--	--	--	--	--	-.18	.16	.11	.14	.47	.30
Puerto Rican	--	--	--	--	--	--	-.09	.22	-.10	.21	.68	.39
Other Latin American	--	--	--	--	--	--	.35	.20	-.17	.20	-.99	.53
Bilingual (1=yes)	-.34	.28	.07	.25	.50	.39	.10	.17	.23	.15	-.27	.39
Proficiency in non-English Language	.97*	.33	-.69*	.31	-.27	.47	.24	.15	-.26	.14	.17	.35
Vocabulary Test Score	.02*	.01	-.01	.01	.01	.02	-.01	.01	.003	.01	-.01	.02
Composite Test Score	.04*	.01	-.03*	.01	.02	.02	.07*	.02	-.04*	.01	-.01	.03
Grade Point Average	.90*	.09	-.53*	.07	-.01	.15	.46*	.12	-.26*	.11	.50	.26
Marital Status	-.86*	.10	.60*	.07	-.89*	.30	-.74*	.15	.48*	.11	-.85	.51
Worked During Base Year	.17*	.05	.05	.05	-.27*	.09	.25*	.08	.02	.07	-.60*	.16
Length of Residence	.17*	.06	-.13*	.06	-.15	.09	.01	.03	-.05	.03	.08	.08
Father's Length of Residence	-.02	.01	.02	.01	.02	.03	.01	.01	.01	.01	-.01	.02
Mother's Length of Residence	.01	.01	-.02	.01	.04	.03	-.02*	.01	.01	.01	-.001	.03
Socioeconomic Status	.76*	.07	-.52*	.07	.27*	.13	.43*	.11	-.33*	.10	.35	.23
Constant	-5.88*	1.73	3.65*	1.54	-8.53*	3.27	-3.41	2.20	-1.20	1.89	1.36	4.83
Log-Likelihood	(-1390.33)		(-1630.16)		(-535.26)		(-587.89)		(-703.97)		(-185.19)	

* p≤.05.

BEST COPY AVAILABLE

respondents are more likely to be unemployed while attending postsecondary education.

As has been the case in all the analyses, marital status emerges as an important predictor of seniors' employment and school enrollment. For both whites and Hispanics, married respondents are less likely to be employed and in school (EMP1) or unemployed and in school (EMP3). However, this latter effect is insignificant for Hispanics. For both Hispanics and whites, married respondents are more likely to be employed and out of school (EMP2).

Turning to the effects of family socioeconomic background, the effects are similar to those found for labor force participation. Among whites, respondents from more affluent family backgrounds are more likely to be in the two in-school categories of the dependent variable (EMP1 and EMP3) and less likely to be in the two out-of-school categories (EMP2 and the base category). The pattern is the same for Hispanics, but the effect of family background in the equation for EMP3 is not statistically significant.

Considering the effects of the scholastic achievement measures, the pattern for both whites and Hispanics is familiar. Higher grade-point averages increase the probability of being employed and in school (EMP1) and lower the chances of being employed and out of school (EMP2). Better performance on the test battery has similar effects. As discussed above, these patterns are probably due to college selection criteria.

The effects of the final general variable considered--previous work experience--are also the same as those found in the other analyses. For both whites and Hispanics, respondents who worked during the base year are more likely to be employed and in school (EMP1) and less likely to be unemployed and in school (EMP3).

Examining the specific variables, there is some evidence of language effects among whites, but not among Hispanics. Among whites, greater facility in a non-English language significantly increases the chances of being employed and in school (EMP1) and lowers the chances of being employed and out of school (EMP2). Finally, English proficiency, as measured by performance on the vocabulary test, increases the probability of postsecondary school enrollment and employment (EMP1).

Among the variables measuring the length of U.S. residence, only one effect appears for Hispanics: respondents whose mothers are long-time residents in the United States are less likely to be employed and enrolled in school (EMP1). Among whites, two effects surface, i.e., respondents who are long-time U.S. residents are more likely than recent immigrants to be employed and in school (EMP1) and less likely to be employed and out of school (EMP2).

Finally, none of the dummy variables for the Hispanic subgroups is significantly related to the dependent variable. This implies that the subgroup differentials in unemployment rates found in Table 4 have been explained by the model.

SUMMARY, CONCLUSION, AND POLICY RECOMMENDATIONS

The descriptive analyses in this paper have shown that Hispanics fare worse, overall, than whites, but not as poorly as blacks, in the schools and in the labor market. Hispanic youths drop out of high school at a higher rate than white youths and a lower rate than black youths. Similarly, the unemployment rate for Hispanic youths is higher than the rate for white youths and lower than the rate for black youths. These statistics for the overall Hispanic population mask considerable heterogeneity among the various Hispanic subgroups. Specifically, Cubans and other Latin Americans fare relatively well when compared with whites, but Puerto Ricans and Mexican-Americans fare relatively poorly. Puerto Rican youths have particularly severe employment problems and often have unemployment rates that are as high as or higher than the rates for black youths.

The descriptive analyses also show that Hispanic-white disparities in labor force participation and unemployment are more severe among high school dropouts than among students in school. These differentials are even smaller for the population of high school graduates.

The multivariate analyses that attempt to explain labor force participation, unemployment, and school enrollment for whites and Hispanics show a number of patterns. For both whites and Hispanics in the sophomore and senior cohorts, family socioeconomic background is consistently related to labor force participation and school enrollment; it is related to employment for seniors, but not for sophomores. With a few exceptions, the specific factors of language and family-immigration history are not consistently related to school and labor market achievements for either Hispanics or whites.

The two most important determinants of labor force participation, employment, and school continuation for both white and Hispanic youths are scholastic achievement and previous employment experience. For both white and Hispanic sophomores, grade-point average is a consistent predictor of these school and labor market variables. For seniors, both grades and performance on standardized tests are related to the outcome variables for both whites and Hispanics. Previous work experience is also strongly related to the dependent variables for both white and Hispanic youths.

In conclusion, it appears that the root of Hispanic youths' labor market problems lies in their education. These results would suggest that policy efforts should be directed toward solving the problem of Hispanic underachievement in the schools. However, the positive independent effects of previous work experience also suggest that youth employment programs are likely to have beneficial results for Hispanic youths. Therefore, a two-pronged approach--through the schools and in the labor market--is likely to be most fruitful in tackling Hispanic youth employment problems.

APPENDIX

CODING INFORMATION

Respondents are classified as Hispanic in this paper on the basis of their answer to the following question from the High School and Beyond follow-up questionnaire: "What is your origin or descent? (If more than one, please mark below the one you consider the most important part of your background)." Under the general heading of "Hispanic or Spanish" were grouped four possible answers: (1) Mexican, Mexican-American, Chicano; (2) Cuban, Cubano; (3) Puerto Rican, Puertoriqueno, or Boricua; and (4) Other Latin American, Latino, Hispanic, or Spanish descent. For simplicity, these have been labeled Mexican-American, Cuban, Puerto Rican, and other Latin American. Respondents are considered white if their response is something other than Hispanic to the national-origin question and "white" to the question "What is your race?" Respondents are defined as black in a similar fashion. The terms "white" and "black" as used in this paper, then, refer to whites and blacks not of Hispanic origin. Hispanics were not differentiated further on the basis of race, because the distinction between concepts of race and ethnicity is blurred in the case of Hispanics. Many of the respondents answered "Other" to the race question, implying that they view their group as a distinct "race" (Nielsen and Fernandez, 1982:Table 1.3).

Regarding the measurement of the dependent variables (labor force participation, employment, and school enrollment status), respondents' labor force status is classified on the basis of their responses to the following questions. Sophomores were asked two items in the follow-up survey: (1) "Did you do any work for pay last week, not counting work around the house?" and (2) "Whether or not you already have a job, were you looking for a job last week?" Response categories of "Yes" and "No" were offered for both questions. Respondents' military enlistment (see Table 3) was determined from this question on the dropout survey: "What were you doing the first week of February 1982?" Among the answers offered was "On active duty in the Armed Forces (or service academy)." Youths who chose this option, regardless of their responses on the labor force status questions, are counted as being enlisted in the military. For the civilian population (i.e., those who did not choose the "On active duty in the military" option), respondents are defined as employed if they answered "Yes" to question (1) above. Civilian respondents are classified as unemployed if they answered "No" to question (1) and "Yes" to question (2). Civilians who answered "No" to both questions are defined as being out of the labor force. Finally, school enrollment status for sophomores is based on whether the respondent was part of the dropout or the in-school follow-up sample.

Parallel to the sophomores, senior cohort respondents who chose the "On active duty in the Armed Forces (or service academy)" option of the question "What were you doing the first week of 1982?" are treated as being enlisted in the military (see Table 5), regardless of their choosing other employment- or school-related options. The employment-related options are (1) "Working for pay at a full-time or part-time job," (2) "With a job but on temporary layoff from work or waiting to report to work," and (3) "Looking for work." Civilians are classified as employed if they chose the first option, unemployed if they chose the second or third option, and out of the labor force if they did not choose any of these options. The school-related options were (1) "Taking academic courses at a two- or four-year college" and (2) "Taking vocational or technical courses at any kind of school or college (for example, vocational, trade, business, or other career training school)." Civilian respondents are classified as enrolled in postsecondary education if they chose either of the school-related options, regardless of whether they chose any of the employment-related options.

The type of postsecondary school that respondents were enrolled in (see Table 4) was not determined by the above school-related item. Rather, respondents were asked to provide the names and addresses of the postsecondary schools that they had attended since leaving high school. Those names and addresses were then matched with data on the characteristics of postsecondary educational institutions (the 1982-1983 Institutional Characteristics Survey of HEGIS, Higher Education General Information Survey, collected by the National Center for Education Statistics). These data were used to group respondents into the four types of postsecondary school enrollment. Note that the data on type of postsecondary enrollment refer to the school that respondents were enrolled in at the time of the follow-up survey (February 1982) or, if not enrolled at that time, the last postsecondary school they were enrolled in.

Regarding the measurement of family socioeconomic status, the variable is a linear composite derived from measures of father's occupation, father's and mother's education, family income, and a set of questions that ask whether the respondent's family receives a daily newspaper; whether the family possesses an encyclopedia or other reference books, typewriter, automatic dishwasher, two or more cars or trucks, more than 50 books, or a pocket calculator; and whether the respondent has his or her own room. Coding on this variable is based on a linearly weighted combination of the above family background measures, where the weights are derived from the non-missing data. If a case has missing data on any of these background variables, the composite is computed from the non-missing data for that case (see Jones et al., 1983:62).

Grades are measured by the question, "Which of the following best describes your grades so far in high school?" Eight response categories were offered from "Mostly A" (a numerical average of 90 to 100) to "Mostly below D" (below 60). The variable was recoded on a four-point scale so that "Mostly A" is assigned "4," "About half A and half B" is coded "3.5," and so on, down to "Mostly below D," which is coded ".5."

The standardized test scores used in these analyses are a composite of reading, vocabulary, and mathematics tests administered during the base-year survey [see Heyns and Hilton (1982) for a detailed discussion of the High School and Beyond cognitive tests]. For both the sophomore and senior cohorts, each individual test was standardized within cohort to have a mean of 50 and a standard deviation of 10. For sophomores, the composite was computed by taking the mean of the non-missing test scores. This procedure was slightly modified for seniors because they were administered two vocabulary tests. Items from the two vocabulary tests were combined before the vocabulary test was standardidized (see Jones et al., 1983:Section 6.9). The test composite was then computed by taking the mean of the standardized non-missing reading, vocabulary, and mathematics test scores.

Regarding the demographic variables (i.e., age, sex, and marital status), age and sex were measured by base-year items. However, because marital status was not measured directly in the base-year survey for seniors, a question from the follow-up survey was used: "What was your marital status the first week of February 1982?" Responses were recoded so that 1 = ever married (i.e., married, divorced, separated, widowed) and 0 = never married. Because sophomores were not asked their marital status directly in either the base-year or follow-up surveys, the following question from the follow-up survey was used to distinguish respondents who had been married from those who had not been married. Respondents were presented a question worded "At what age do you expect to ... ," which was completed with a number of items, including "Get Married?" Among the response categories for this question is "Have already done this." Respondents who chose this response to the "Get Married" item were coded in parallel fashion to the seniors, i.e., 1 = ever married, versus 0 = never married for those who did not choose this response.

Both sophomores and seniors were asked, "Did you do any work for pay last week, not counting work around the house?" Responses of "yes" and "no" were offered and are coded here as one and zero, respectively.

Regarding parent's length of U.S. residence, students were asked in the base-year survey how much of their mother's and father's lives have been spent in the United States. Each variable had five response categories: (1) about 1-5 years; (2) about 6-10 years; (3) about 11-20 years; (4) more than 20 years, but not all; and (5) all or almost all. Categories (1) through (3) were recoded to the midpoint (3, 8, and 15.5 years, respectively). Categories (4) and (5) presented more of a problem because they implicitly refer to the parent's age, for which High School and Beyond does not have a measure. The values for these two categories were imputed by using the modal age of mother's childbearing (25) and adding the student's modal age (15 for sophomores and 17 for seniors) and assigning that to the fifth ("All or almost all") category. Therefore, the value imputed for sophomores is 40 and for seniors, 42. The midpoint of the fourth category then became defined as 29 years for sophomores and 31 years for seniors. This procedure was repeated for father's length of residence, but three years were added to account for a typical three-year difference in age between husbands and wives. Thus, the fourth and fifth categories for father's length of residence were recoded to 43 and 30.5, respectively, for sophomores, and 45 and 32.5 for seniors.

Students were also asked to report how much of their lives had been spent in the United States. The response categories were (1) about 1-5 years; (2) about 6-10 years; (3) more than 10 years, but not all; and

(4) all or almost all. Since available data included the student's age, all the categories were well defined and recoded as follows: (1) 3 years; (2) 8 years; (3) (10 + student's age)/2; and (4) student's age. If the student's age was not available, it was imputed for use in the student length-of-residence variable as the modal age--for sophomores 15 and for seniors 17. This was done for only a few cases.

Language questions were administered through a separate questionnaire to all respondents (i.e., not just Hispanics) who passed a filter of five questions that asked about the respondent's mother tongue and languages presently spoken at home. Those students who reported a language other than English in response to one of the five questions regarding language background were asked to choose on a four-point scale how well they understood, spoke, read, and wrote the non-English language. The response categories are "Not at All," "Not Very Well," "Pretty Well," and "Very Well" and were coded from zero to four. Exploratory factor analysis of the survey's pretest data showed that the four items clearly load on one factor, with each of the indicators contributing equally (see Fernandez, 1980). The composite index was formed by taking the mean of the four items. Note that the coding is positive, ranging from a low of zero (indicating no proficiency in the other language) to a high of three (indicating high proficiency). Those students who did not pass the language background filter (i.e., were monolinguals) were assigned a zero on the scale for proficiency in non-English language. When combined with the dummy variable for language background, this coding has the effect of creating a spline for the proficiency-in-other-language scale.

English proficiency is measured by the student's performance on the base-year standardized vocabulary test. To simplify across-cohort comparisons, the scores used are based on the subset of test items that were identical in the sophomore and senior test batteries. The test is standardized to a mean of 50 and a standard deviation of 10.

REFERENCES AND BIBLIOGRAPHY

Albert, Martin L., and Loraine K. Obler

1978 *The Bilingual Brain: Neuropsychological and Neurolinguistic Aspects of Bilingualism*. New York: Academic Press.

Ashford, J., and R. Snowden

1970 Multivariate probit analysis. *Biometrics* 26:535-546.

Aspira

1976 *Social Factors in Educational Attainment among Puerto Ricans in U.S. Metropolitan Areas, 1970*. Puerto Ricans and Education Report No. 1. New York: Aspira of America.

Bach, Robert L.

1980 The new Cuban immigrants: their background and prospects. *Monthly Labor Review* 103(October):39-46.

Barrera, Mario

1979 *Race and Class in the Southwest*. South Bend, Ind.: University of Notre Dame Press.

Barth, Fredrick, ed.

1969 *Ethnic Groups and Boundaries*. Boston, Mass.: Little, Brown.

Blau, Peter M., and Otis Dudley Duncan

1967 *The American Occupational Structure*. New York: John Wiley & Sons.

Borjas, George J.

1982 The earnings of male Hispanic immigrants in the United States. *Industrial and Labor Relations Review* 35, no. 3 (April):343-353.

Borus, Michael E., ed.

1983 *Tomorrow's Workers*. Lexington, Mass.: D.C. Heath.

Borus, Michael E., J.E. Crowley, R.W. Rumberger, R. Santos, and David Shapiro

1980 *Pathways to the Future: A Longitudinal Study of Young Americans*. Youth Knowledge Development Report 2.7. Washington, D.C.: U.S. Department of Labor.

Bowles, Samuel, and Herbert Gintis

1977 *Schooling in Capitalist America*. New York: Basic Books.

Briggs, Vernon M., Walter Fogel, and Fred Schmidt

1977 *The Chicano Worker*. Austin: University of Texas Press.

Bureau of the Census

1979a Coverage of the Hispanic population of the United States in the 1970 census: a methodological analysis. *Current Population Reports*. Series P. 23, no. 82. Washington, D.C.: Bureau of the Census.

1979b Persons of Spanish origin in the United States: March 1978. *Current Population Reports*. Series P. 20, no. 339. Washington, D.C.: Bureau of the Census.

1982 Population profile of the United States: 1981. *Current Population Reports*. Series P. 20, no. 374. Washington, D.C.: Bureau of the Census.

Carliner, Geoffrey

1976 Returns to education for blacks, anglos and five Spanish groups. *Journal of Human Resources* 11:172-184.

1980 Wages, earnings, and hours of first, second, and third generation American males. Economic Inquiry 18:87-102.

1981 Wage differences by language group and the market for language skills in Canada. Journal of Human Resources 16:384-399.

Carter, Thomas P., and Robert D. Segura

1979 Mexican-Americans in School: A Decade of Change. New York: College Entrance Examination Board.

Chiswick, Barry

1977 Sons of immigrants: are they at an earnings disadvantage? American Economic Review 67(February):376-80.

1978 The effects of Americanization on the earnings of foreign-born men. Journal of Political Economy 86:897-922.

1979 The economic progress in immigrants: some apparently universal patterns. Pp. 357-399 in William Fellner, ed., Contemporary Economic Problems. Washington, D.C.: American Enterprise Institute for Public Policy Research.

1980a An analysis of the economic progress and impact of immigrants. Washington, D.C.: U.S. Department of Labor.

1980b Immigrants' earnings patterns by sex, race, and ethnic groupings. Monthly Labor Review 103(October):22-25.

1982 The Employment of Immigrants in the United States. Washington, D.C.: American Enterprise Institute for Public Policy Research.

Clark, Juan M.

1977 The Cuban Exodus. Why? Report to the Cuban Exile Union, Miami, Fla. Photocopy.

Clogg, Clifford C.

1979 Measuring Underemployment: Demographic Indicators for the United States. New York: Academic Press.

Cummins, James

1976 The Influence of Bilingualism on Cognitive Growth: A Synthesis of Research Findings and Explanatory Hypotheses. Working Papers on Bilingualism No. 9. April:1-43.

1977 Psycholinguistic evidence. Pp. 78-89 in Center for Applied Linguistics, ed., Bilingual Education: Current Perspectives. Volume 4, Education. Arlington, Va.: Center for Applied Linguistics.

Dillard, J.L.

1973 Black English: Its History and Usage in the United States. New York: Vintage Books.

Duncan, Beverly

1965 Dropouts and the unemployed. Journal of Political Economy 73:121-134.

Duncan, O.D., D.L. Featherman, and B. Duncan

1972 Socioeconomic Background and Achievement. New York: Seminar.

Duran, Richard P.

1983 Hispanics' Education and Background: Predictors of College Achievement. New York: College Entrance Examination Board.

Edwards, Linda

1976 School retention of teenagers over the business cycle. Journal of Human Resources 11, no. 2 (Spring):1-13.

Estrada, Leobardo
1980 Review and analysis of Hispanic youth employment data collection systems and reporting methods. Pp. 21-50 in National Council of La Raza, ed., Hispanic Youth Employment: Establishing a Knowledge Base. Knowledge Development Report 10.1. Washington, D.C.: U.S. Department of Labor.

Featherman, David L., and T. Michael Carter
1976 Discontinuities in schooling and the socioeconomic life cycle. Pp. 133-161 in W.H. Sewell, R.M. Hauser and D.L. Featherman, eds., Schooling and Achievement in American Society. New York: Academic Press.

Featherman, D.L., and R.M. Hauser
1978 Opportunity and Change. New York: Academic Press.

Fernandez, Roberto M.
1980 Selected analyses of the pretest data. Appendix D in Francois Nielsen, Hispanic Youth in U.S. Schools: A Design for Analysis. Washington, D.C.: National Center for Education Statistics.

Fernandez, Roberto M., and Francois Nielsen
1984 Bilingualism and Hispanic Scholastic Achievement: Some Baseline Results. Unpublished manuscript. Department of Sociology, University of Arizona.

Fishman, Joshua A.
1969 A sociolinguistic census of a bilingual neighborhood. American Journal of Sociology 75, no. 3:323-339.

Fishman, Joshua A., and Robert C. Cooper
1969 Alternative measures of bilingualism. Journal of Verbal Learning and Verbal Behavior 8:276-282.

Fishman, Joshua A., and Charles Terry
1969 The validity of census data on bilingualism in a Puerto Rican neighborhood. American Sociological Review 34:636-650.

Fligstein, Neil, and Roberto M. Fernandez
1982 The Causes of Hispanic Educational Attainment: History, Patterns, and Analyses. A report to the National Commission for Employment Policy, Washington, D.C.
1985 Educational transitions of whites and Mexican-Americans. Pp. 161-192 in Marta Tienda and George Borjas, eds., Hispanics in the U.S. Economy. New York: Academic Press.

Frankel, Martin, Luane Kohnke, David Buonanno, and Roger Tourangeau
1981 High School and Beyond Sample Design Report. Chicago, Ill.: National Opinion Research Center.

Freeman, Richard, and David Wise, eds.
1982 The Youth Labor Market. Chicago, Ill.: University of Chicago Press.

Garcia, Phillip
1983 Dual Language Characteristics and Earnings: Male Mexican Workers in the United States. Los Angeles Population Research Laboratory, University of Southern California. Photocopy.

Harber, Jean R., and D.N. Bryen
1976 Black English and the task of reading. Review of Educational Research 46(3):387-405.

Hauser, Robert M.
1971 Socioeconomic Background and Educational Performance. Washington, D.C.: American Sociological Association.

Heckman, James J.
1979 Sample selection bias as a specification error. Econometrica 47:153-162.

Hernandez, J., L. Estrada, and D. Alvirez
1973 Census data and the problem of conceptually defining the Mexican-American population. Social Science Quarterly 53(4):671-687.

Heyns, Barbara, and Thomas L. Hilton
1982 The cognitive tests for High School and Beyond: an assessment. Sociology of Education 55(April/July): 89-102.

Hirano-Nakanishi, Marsha, and R.L. Diaz
1982 Differential Educational Attainment among "At-Risk" Youth: A Case Study of Language Minority Youth of Mexican Descent and Low Socioeconomic Status. Los Alamitos, Calif.: National Center for Bilingual Research.

Hogan, Dennis P.
1981 Transitions and Social Change: The Early Lives of American Men. New York: Academic Press.

Jaffe, A.J., Ruth M. Cullen, and Thomas D. Boswell
1980 The Changing Demography of Spanish Americans. New York: Academic Press.

Jencks, C.S., M. Smith, H. Acland, M.J. Bane, D. Cohen, H. Gintis, B. Heyns, and S. Michelson
1972 Inequality: A Reassessment of the Effect of Family and Schooling in America. New York: Harper and Row.

Jencks, C.S., S. Bartlett, J. Crouse, D. Eaglesfield, G. Jackson, K. McClelland, P. Mueser, M. Olneck, J. Schwartz, S. Ward, and J. Williams
1979 Who Gets Ahead? The Determinants of Economic Success in America. New York: Basic Books.

Jones, Calvin, M. Clarke, G. Mooney, H. McWilliams, I. Crawford, B. Stephenson, and R. Tourangeau
1983 High School and Beyond: 1980 Senior Cohort First Follow-up (1982) Data File User's Manual. Washington, D.C.: National Center for Education Statistics.

Jorge, Antonio, and Raul Moncanz
1980 Cubans in South Florida: a social science approach. Metas 1, no. 3 (Fall):37-87.

Labov, William
1976 Language in the Inner City: Studies in the Black English Vernacular. Philadelphia: University of Pennsylvania Press.

Lambert, Wallace, and Richard Tucker
1972 Bilingual Education of Children: The St. Lambert Experiment. Rowley, Mass.: Newbury House.

Lewin-Epstein, Noah
1981 Youth Employment During High School. An Analysis of High School and Beyond: A National Longitudinal Study for the 1980's. Washington, D.C.: National Center for Education Statistics.

Lopez, David E.
1976 The social consequences of Chicano home/school bilingualism. *Social Problems* 24, no. 2 (Dec.):234-246.

Mayers, Raymond Sanchez
1980 Characteristics of Hispanic youth. Pp. 51-88 in National Council of La Raza, ed., *Hispanic Youth Employment: Establishing a Knowledge Base*. Knowledge Development Report 10.1. Washington, D.C.: U.S. Department of Labor.

McKay, Roberta V.
1974 Employment and unemployment among Americans of Spanish Origin. *Monthly Labor Review* 97(April):12-16.

McLaughlin, Steven D.
1982 *English Language Proficiency, Occupational Characteristics and the Employment Outcomes of Mexican-American Men*. Seattle, Wash.: Battelle Human Affairs Research Centers.

McManus, Walter, William Gould, and Finis Welch
1983 Earnings of Hispanic men: the role of English language proficiency. *Journal of Labor Economics* 1(2):101-30.

National Center for Education Statistics
1980 *The Condition of Education for Hispanic Americans*. Washington, D.C.: National Center for Education Statistics.

National Commission for Employment Policy
1982 *Hispanics and Jobs: Barriers to Progress*. Washington, D.C.: National Commission for Employment Policy.

National Commission for Manpower Policy, ed.
1976 *From School to Work: Improving the Transition*. Washington, D.C.: National Commission for Manpower Policy.

National Council of La Raza
1980 *Hispanic Youth Employment: Establishing a Knowledge Base*. Knowledge Development Report 10.1. Washington, D.C.: U.S. Department of Labor.

Neugarten, Bernice, and G.O. Hagestad
1976 Age and the life course. Pp. 35-55 in R. H. Binstock and E. Shanas, eds., *Handbook of Aging and the Social Sciences*. New York: Van Nostrand Reinhold.

Newman, Morris J.
1978 A profile of Hispanics in the U.S. work force. *Monthly Labor Review* (December):3-14.

Nielsen, Francois
1980 *Hispanic Youth in the U.S. Schools: A Design for Analysis*. Washington, D.C.: National Center for Education Statistics.

Nielsen, Francois, and Roberto M. Fernandez
1982 *Achievement of Hispanic Students in American High Schools: Background Characteristics and Achievement*. Washington, D.C.: National Center for Education Statistics.

Noboa, Abdin
1980 Hispanics and desegregation: summary of Aspira's study of Hispanic segregation trends in U.S. school districts. *Metas* 1, no. 3 (Fall):1-24.

Olivas, Michael

1979 The Dilemma of Access: Minorities in Two Year Colleges. Washington, D.C.: Howard University Press.

1981 Financial Aid: Access and Packaging Policies. Institute for Research on Educational Finance and Governance. Palo Alto, Calif.: Stanford University.

O'Malley, J.M.

1981 Children's English and Services Study: Language Minority Children with Limited English Proficiency in the United States. Rosslyn, Va.: InterAmerica Research Associates.

Ornstein, Michael D.

1976 Entry into the American Labor Force. New York: Academic Press.

Osterman, Paul

1980 Getting Started: The Youth Labor Market. Cambridge, Mass.: MIT Press.

Peal, Elizabeth, and Wallace Lambert

1962 The relation of bilingualism to intelligence. Psychological Monographs: General and Applied 76(546):1-23.

Pedraza-Bailey, Silvia

1980 Political and Economic Migrants in America: Cubans and Mexicans. Ph.D. dissertation. Department of Sociology, University of Chicago.

Pedraza-Bailey, Silvia, and Terry Sullivan

1979 Bilingual education in the reception of political immigrants: the case of Cubans in Miami, Florida. In Raymond V. Padilla, ed., Ethnoperspectives in Bilingual Education Research: Bilingual Education and Public Policy in the United States. Department of Foreign Languages and Bilingual Studies. Ypsilanti, Mich.: Eastern Michigan University.

Peng, Samuel S.

1977 Trends in the entry into higher education: 1961-1972. Educational Researcher 6(1):15-9.

Portes, Alejandro

1982 Immigrants' attainment: an analysis of occupation and earnings among Cuban exiles in the United States. Pp. 91-111 in R.M. Hauser, F. Mechanic, A.O. Haller, and T.S. Hauser, eds., Social Structure and Behavior: Essays in Honor of William Hamilton Sewell. New York: Academic Press.

Portes, Alejandro, and R.L. Bach

1980 Immigrants earnings: Cuban and Mexican immigrants in the United States. International Migration Review 14(3):315-342.

Portes, Alejandro, J.M. Clark, and R.L. Bach

1977 The new wave: a statistical profile of recent Cuban exiles to the United States. Cuban Studies 7(January):1-32.

Portes, Alejandro, J.M. Clark, and M. Lopez

1981 Six years later: the process of incorporation of Cuban exiles in the United States: 1973-1979. Cuban Studies 11, no. 2 (July):1-24.

Reimers, Cordelia W.

1984 Sources of the family income differentials among Hispanics, blacks, and white non-Hispanics. American Journal of Sociology 89(4):889-903.

Rogg, Eleanor M.

1974 The Assimilation of Cuban Exiles. New York: Aberdeen Press.

Rumberger, Russell W.

1980 High school dropouts. Pp. 267-277 in M. Borus, J. Crowley, R. Rumberger, R. Santos, and D. Shapiro, Pathways to the Future: A Longitudinal Study of Young Americans. Center for Human Resource Research. Columbus: Ohio State University.

1983 Dropping out of high school: the influence of race, sex, and family background. American Educational Research Journal 20, no. 2 (Summer):199-220.

Ryscavage, Paul M., and Earl F. Mellor

1973 The economic situation of Spanish Americans. Monthly Labor Review 96(April):3-16.

Santana-Cooney, Rosemary

1979 Intercity variations in Puerto Rican female participation. Journal of Human Resources 14:222- 35.

Santana-Cooney, Rosemary, and A.E. Warren

1979 Declining female participation among Puerto Rican New Yorkers: a comparison with native white nonSpanish New Yorkers. Ethnicity 6:281-297.

Sewell, William H.

1971 Inequality of opportunity for higher education. American Sociological Review 36:793-809.

Sewell, W.H., and R.M. Hauser

1975 Education, Occupation, and Earnings: Achievement in the Early Career. New York: Academic Press.

Shea, Brent

1976 Schooling and its antecedents: substantive and methodological issues in the status attainment process. Review of Educational Research 46:463-625.

Smith, Tom W.

1980 Ethnic measurement and identification. Ethnicity 7:78-95.

1983 Problems in ethnic measurement: over-, under- and misidentification. American Statistical Association Proceedings:107-116.

Spence, A. Michael

1974 Market Signaling: Information Transfer in Hiring and Related Screening Processes. Cambridge, Mass.: Harvard University Press.

Steinberg, L.D., P.L. Belinde, and K.S. Chan

1982a Dropping Out Among Language Minority Youth: A Review of the Literature. Los Alamitos, Calif.: National Center for Bilingual Research.

Steinberg, L.D., D. Greenberger, L. Garduque, and S. McAuliffe

1982b High school students in the labor force: some costs and benefits to schooling and learning. Educational Evaluation and Policy Analysis 4(3):363-372.

Stevenson, Wayne

1978a The relationship between early work experience and future employability. Pp. 93-124 in Avril V. Adams and Garth L. Mangum, ed., The Lingering Crisis of Youth Unemployment. Kalamazoo, Mich.: W.E. Upjohn Institute for Employment Research.

1978b The transition from school to work. Pp. 65-92 in Avril V. Adams and Garth L. Mangum, eds., The Lingering Crisis of Youth Unemployment. Kalamazoo, Mich.: W.E. Upjohn Institute for Employment Research.

Stolzenberg, Ross M.

1982 Occupational Differences between Hispanics and Non-Hispanics. Report to the National Commission for Employment Policy. Santa Monica, Calif.: Rand Corporation.

Sullivan, Teresa A.

1979 Marginal Workers, Marginal Jobs: The Underutilization of American Workers. Austin: University of Texas Press.

Sullivan, Terry, and Silvia Pedraza-Bailey

1979 Differential Success Among Cuban-American and Mexican-American Immigrants: The Role of Policy and Community. Washington, D.C.: U.S. Department of Labor, Employment and Training Administration.

Theil, Henri

1971 Principles of Econometrics. New York: John Wiley & Sons.

Tienda, Marta, ed.

1981 Hispanic Origin Workers in the U.S. Labor Market: Comparative Analyses of Employment and Earnings. Washington, D.C.: U.S. Department of Labor.

1982 Sex, ethnicity and Chicano status attainment. International Migration Review 16(2):435-473.

1983 Market characteristics and Hispanic earnings: a comparison of natives and immigrants. Social Problems 31, no. 1 (October):59-72.

Trieman, D.J., and K. Terrell

1975 Sex and the process of status attainment: a comparison of working women and men. American Sociological Review 40(April):174-200.

U.S. Commission on Civil Rights

1971 The Unfinished Education: Outcomes for Minorities in the Five Southwestern States. Washington, D.C.: U.S. Commission on Civil Rights.

1974 Counting the Forgotten: The 1970 Census Count of Persons of Spanish Speaking Background. Washington, D.C.: U.S. Commission on Civil Rights.

1978 Social Indicators of Equality for Minorities and Women. Washington, D.C.: U.S. Commission on Civil Rights.

1982 Unemployment and Underemployment Among Blacks, Hispanics, and Women. Washington, D.C.: U.S. Commission on Civil Rights.

U.S. Department of Health, Education and Welfare
1974 *A Study of Selected Socioeconomic Characteristics of Ethnic Minorities Based on the 1970 Census. Volume I: Americans of Spanish Origin*. Publication No. (OS) 75-120. Washington, D.C.: U.S. Department of Health, Education and Welfare.

Veltman, Calvin
1980 *Relative Educational Attainments of Minority Language Children*. Washington, D.C.: National Center for Education Statistics.
1981 *The Role of Language Characteristics in the Socioeconomic Attainment Process of Hispanic Origin Men and Women*. Washington, D.C.: National Center for Education Statistics.

Wilson, K.L., and W.A. Martin
1982 Ethnic enclaves: a comparison of the Cuban and Black economies in Miami. *American Journal of Sociology* 88(1):135-60.

Wilson, Kenneth L., and Alejandro Portes
1980 Immigrant enclaves: an analysis of the labor market experiences of Cubans in Miami. *American Journal of Sociology* 86:295-319.

The Participation of Young Women in Employment and Training Programs

Margaret Simms

When the federal government initiated employment and training programs in the 1960s, the focus was on assisting adult males who had been displaced from their jobs by technological change or who were structurally unemployed. Even in youth programs, where displacement and long-term unemployment were less important, the emphasis was on males. It was thought that their employment needs were greater and that unemployment was likely to lead to criminal behavior among young men, but not among young women.

Over time, the economic needs of women, especially young women, became an issue. Increased labor force participation by women and the "feminization of poverty" made policymakers and others aware of the importance of providing meaningful employment and training opportunities to young women. This interest has been reinforced by studies that indicate that unemployment among young women can have a deleterious effect on their future employment and earnings (Taggart and Linder, 1980). In the absence of intervention, however, many young women will not have favorable labor market experiences. This is especially true for black women; the data indicate that labor force and employment conditions for black teenage women have been deteriorating over the past 25 years (Stormsdorfer, 1980; Swinton and Morse, 1983).

This paper reviews the participation of young women in employment and training programs. The first section describes the variety of programs that youths have participated in, the level of participation by young women, and the characteristics of young female participants compared with their male counterparts. The second section reviews the type of service received by participants and examines program outcomes. The final section summarizes the findings and suggests subjects for additional research.

Margaret C. Simms is director of the Minorities and Social Policy Program at The Urban Institute. The opinions expressed in this paper are the sole responsibility of the author and do not necessarily represent the views of The Urban Institute and its sponsors.

YOUTH PARTICIPATION IN EMPLOYMENT AND TRAINING PROGRAMS

The federal government's post-World War II involvement in employment and training programs began with the Manpower Development and Training Act (MDTA) of 1962. Government training programs designed especially for youths started with the creation of the Neighborhood Youth Corps (NYC) and the Job Corps through the Economic Opportunity Act of 1964. When the Comprehensive Employment and Training Act (CETA) was passed in 1973, most of the existing youth programs were included in the consolidation of employment and training activities although they remained separate activities. In 1977 the Youth Employment and Demonstration Projects Act (YEDPA) added additional programs targeted on youths. This legislation expired in 1981 and all youth training programs were subsumed under the Job Training Partnership Act (JTPA) in 1982. (Job Corps and the Summer Youth Employment Program (SYEP) are separate programs under JTPA.)

Young people have not only enrolled in youth programs but have also participated in the full range of employment and training programs since the mid-1960s. Between 1965 and 1972 youths were between 20 and nearly 50 percent of enrollees in such programs as the Public Employment Program, the Work Incentive Program (WIN), MDTA, Job Opportunities in the Business Sector (JOBS), and the Concentrated Employment Program (CEP). Youths (under age 22) constituted between 48 and 62 percent of enrollees in CETA Title I in the years 1975 to 1981 and more than 20 percent of enrollees in Titles II and VI during the same years.[1]

Female Participation

Studies of participation in employment and training programs by women indicate that women have not been treated equally over the history of these programs. Between fiscal 1965 and fiscal 1978, women were less than one-half of program participants (Harlan, 1980). In fiscal 1978 women were 45 percent of enrollees in locally operated programs. By the last quarter of fiscal 1979, women were more than 50 percent of enrollees in all local programs except on-the-job training. Very few studies have focused exclusively on participation by young women, but estimates of their participation can be constructed from data on youth programs and from female and youth participation in adult programs.

Table 1 shows female participation in youth programs prior to the 1973 passage of CETA and for selected programs under CETA and YEDPA. Before 1973, the largest youth program was the Neighborhood Youth

---

[1] After 1979, Titles I, II, and VI should be interpreted as Titles II-B and C, II-D, and VI, respectively. No data are yet available on JTPA enrollment. See Burbridge (1983) for a history of youth participation in employment and training programs.

TABLE 1 Female Participation in Selected Youth Programs, 1965-1980

	Percentage Female		
	1965-1972	1978	1980
1965-1972			
Neighborhood Youth Corps			
In-school youths	45.2		
Out-of-school youths	47.7		
Job Corps	27.0		
1978-1980			
Job Corps		29.0	NA
Youth Employment and Training Programs		51.3	52.5
Youth Community and Conservation Improvement Projects		24.8	24.8
Summer Youth Employment		51.4	48.1

SOURCES: L.C. Burbridge (1983) and S.E. Berryman, W.K. Chow, and R.M. Bell (1981).

Corps. Over 4.5 million youths enrolled in NYC between 1965 and 1972, and between 45 and 48 percent of them were young women. In the much smaller, residential Job Corps program, young women were only 27 percent of enrollees. By 1978, women were 51 percent of enrollees in the summer youth program (SYEP) and in Youth Employment and Training Programs (YETP), but still lagged in Job Corps enrollment. Even so, they may still have been underrepresented in SYEP and YETP, since it is estimated that they were 54 percent of the eligible population (Berryman et al., 1981). Female enrollment in Youth Community Conservation and Improvement Projects (YCCIP) was only 24.8 percent in both 1978 and 1980, although it is estimated that young women were about 46 percent of the eligible population for YCCIP. This discrepancy is thought to be due to sexual stereotyping, since YCCIP involved intensive manual labor, more so than did other programs (Burbridge, 1983).

Overall, young women have done slightly better than adult women in terms of participation in employment and training programs. However, this is primarily the result of their greater representation in youth programs. In adult CETA programs, women have been a smaller proportion of enrollees under age 22 than they have been of enrollees aged 22 and over (Table 2).

An examination of the enrollment of youths in CETA and other employment and training programs by race and sex reveals some minor differences by sex, but far less than might be expected. Data from the 1977 Continuous Longitudinal Manpower Survey (CLMS) and Current Population Survey (CPS) reveal that women were just under 47 percent of the

TABLE 2 Female Participation in Adult CETA Programs, 1978

	Women as a Percentage of Participants Aged 22 and Over	 Under Age 22
Title I	52.5	48.1
Title II	41.6	34.7
Title VI	37.4	
Total	45.5	48.6[a]

[a] Includes Summer Youth Employment Program, Youth Community Conservation and Improvement Projects, and Youth Employment and Training Projects.

SOURCE: S.E. Berryman, W.K. Chow, and R.M. Bell (1981).

enrollees in CETA programs and 50.3 percent of the youth population (aged 22 and under) (Table 3). Most of the discrepancy was among white women, whose participation in CETA was well below that of white men. Black and Hispanic women, whose CETA participation exceeded their representation in the population, participated at rates comparable to those of their male counterparts. The National Longitudinal Survey (NLS) of Young Americans (see Borus, 1983:120) produced roughly comparable estimates of participation in all government employment and training programs by youths between the ages of 14 and 21 during 1978 and early 1979.

Characteristics of Program Participants

In addition to concern over their lower participation in government-sponsored employment and training programs, it has been said that the young women are better qualified than the young men who enter the programs. This may occur because there is more "creaming" among women than among men. In creaming, the program sponsor selects those applicants who, in the sponsor's view, are the best qualified of those eligible to participate in the program. The young women who are selected into the program may have to meet higher standards in terms of education or prior experience. However, there could also be differences between young men and young women in terms of who chooses to apply for the employment and training programs. For example, if young women have different perceptions about their likely participation in the labor force as adults, they might also differ in their interest in enrolling in employment and training programs. In a study done for The Rockefeller Foundation, The Urban Institute examined the characteristics of young women who participated in employment and training programs and compared them with the characteristics of young men who participated

TABLE 3 Percentage Distribution in the CLMS and CPS Populations by Race and Sex for Individuals Under Age 23, Fiscal 1977

	Percentage of CLMS		Percentage of CPS	
	Females	Males	Females	Males
White	17.80	24.16	40.48	40.45
Black	23.18	23.93	6.94	6.36
Hispanic	5.94	4.96	2.92	2.86
Total	46.92	53.05	50.34	49.67

NOTE: These calculations exclude other minorities (i.e., nonblack, non-Hispanic minority groups).

SOURCE: Data from L.J. Bassi, M.C. Simms, L.C. Burbridge, and C.L. Betsey (1984).

and nonparticipant youths. The objective of the study was to identify possible differences and to determine which differences, if any, affected the probability of participation in government-sponsored employment and training programs (Simms and Leitch, 1983).

The Urban Institute study was based on data from the National Longitudinal Survey of Young Americans. The NLS is a good data set for analyzing youth participation in employment and training programs because it allows one to compare participants with nonparticipants. The data set includes more than 12,000 individuals aged 14 to 21 in 1979. The survey oversampled minorities and low-income whites, the groups most likely to participate in employment and training programs. Just over 2,000 respondents had participated in at least one government-sponsored employment and training program prior to the 1980 survey interviews. Although participation rates were higher among minority groups--one-third of the blacks interviewed had participated in a program, compared with 11 percent of whites and 24 percent of Hispanics--there were no substantial differences by sex (Table 4).

In general, young women in the sample had higher levels of educational attainment than young men. Overall, young men in the sample were more likely to have less than a high school education (49.2 percent of the men versus 44.5 percent of the females in the sample) and were less likely to have completed any formal education beyond high school (19.2 percent for males versus 23.8 percent for females) (see Table 5). This differential was similar for all ethnic groups, except Hispanics. For those who had participated in government programs, the educational gap was much wider. Among participants between January 1978 and spring 1980, there were large differences between men and women; a larger percentage of the female than the male participants had

TABLE 4 Percentage of the Population Participating in Employment and Training Programs Prior to 1980

	Men			Women		
	Single Program	Multiple Programs	Total	Single Program	Multiple Programs	Total
White	7.6	3.3	10.9	7.5	3.8	11.3
Black	21.3	11.8	33.1	19.6	12.3	31.9
Hispanic	13.4	10.7	24.1	15.1	8.3	23.4
Other	12.0	5.1	17.1	7.6	5.2	12.8

NOTE: Based on National Longitudinal Survey sample of youths aged 14 to 21 who answered this question.

SOURCE: M.C. Simms and M.L. Leitch (1983).

completed high school and acquired some college education. With the exception of Hispanics, the gender differences in educational attainment were greater for government-program participants than for nonparticipants.

Educational gaps are also apparent when another data set is used. For example, a comparison of 1977 youth enrollees in CETA with youths in the Current Population Survey reveals that while young men in general were more likely to be high school dropouts, the differences between men and women in CETA programs were somewhat greater, at least among whites: white male enrollees had dropout rates that were at least twice as high as those of white women who were enrolled in CETA programs (Bassi et al., 1984).

To investigate the possibility that young women who entered government programs had different qualifications because of differences in willingness to participate in the program, Simms and Leitch (1983) analyzed the attitudes of young women toward work as part of the Rockefeller study. Since young women have two options not available to young men--childbearing and, generally, work in the home--young women as a group might be less interested in employment and training programs. Researchers had hypothesized that women who participate in employment and training programs have less traditional attitudes than nonparticipants and are also more likely to expect to be in the labor market for most of their adult years. This was the case for women who participated in programs prior to 1978. However, since it is possible that program participation and maturation affected their attitudes, it is more useful to concentrate on those who participated after January 1978, since the information available on respondents' attitudes is most likely to precede participation. Here we find that women who were participants in government programs after 1977 were no less likely to

TABLE 5 Highest Grade Completed, by Sex, 1979

	Males	Females
Total Sample	100.0[a]	100.0[a]
Less than high school	49.2	44.5
High school	31.5	31.8
More than high school	19.2	23.8
Enrollees in Government Programs after 1977	100.0	100.0
Less than high school	80.4	69.4
High school	8.9	27.8
More than high school	10.7	2.8

NOTE: Based on National Longitudinal Survey sample of youths aged 14 to 21 who answered this question.

[a] Totals do not add to 100.0 due to rounding.

SOURCE: M.C. Simms and M.L. Leitch (1983).

think that a woman's place is in the home than were women who did not participate in training programs. And they were more likely to think that a woman's place is in the home than those who participated in private or military training programs (Table 6). However, when asked what they expect to be doing at age 35, government-program participants were more likely to say "working," indicating that they expect economic reality to be a factor in their actions.

Another factor that might affect participation by young women is family responsibilities. Young women with children or other family responsibilities may not be able to participate in programs, either because they lack child care or because they cannot take time away from nonmarket work. In 1979 the vast majority of the respondents in the NLS sample lived with their parents. Young women, however, were less likely to live with their parents than young men and were more likely to be married or living on their own. There were large racial differences in living arrangements beginning at age 18; blacks of both sexes were much less likely to live on their own than members of other racial or ethnic groups.

The women in the sample, both married and unmarried, were much more likely to have children than the men in the sample; 17 percent of the women in the sample had at least one child, compared with 6.9 percent of the men. There were 496 women in the sample who were heads of households (7.8 percent of all women in the sample).

Participants in government training programs were no more likely to be married than participants in the sample as a whole. They were, however, more likely to have children. A significant proportion of

TABLE 6 Women's Responses to Statement "A Woman's Place Is in the Home," by Participant Status (in percentages)

Time and *Participant Status*	Strongly *Disagree*	*Disagree*	*Agree*	Strongly *Agree*
Pre-1978				
Nonparticipants[a]	39.5	44.5	11.6	4.3
Participants in other training programs	41.1	47.3	8.5	3.1
Participants in government programs	46.7	42.4	7.3	3.6
Post-1978				
Nonparticipants	39.0	44.8	11.7	4.5
Participants in other training programs	53.4	39.3	5.9	1.4
Participants in government programs	39.3	45.5	10.7	4.5

NOTES: Based on National Longitudinal Survey sample of youths aged 14 to 21 who answered this question.

[a] Totals do not add to 100.0 due to rounding.

SOURCE: M.C. Simms and M.L. Leitch (1983).

women who were heads of households had participated in some type of employment or training program.

The last phase of the study of the determinants of participation in employment and training programs was a multivariate analysis. The main objective of this analysis was to determine which factors are likely to affect participation in employment and training programs, whether those factors differ for men and women, and whether after adjusting for all the relevant factors there is still a sex differential. Included in the regression analysis were independent variables in six broad categories: (1) background and demographic characteristics, (2) education, (3) family responsibilities and attitudes, (4) financial need, (5) work experience (including prior participation in training programs), and (6) local employment conditions.

Based on past studies of women's participation in adult programs, we expected to find that young women were less likely to participate in employment and training programs and that young women who did participate in programs were likely to be better qualified than their male counterparts. In our regression analysis, we found some evidence to indicate that young women were less likely to be enrolled in government-sponsored employment and training programs, other things being equal (Table 7). This is clearly the case for enrollment in the pre-1978 period. After January 1978, the significance of sex is not as clear. In equations that did not include participation prior to 1978 as an independent variable, the coefficient for sex was negative and significant. Once prior participation was entered into the equation, the coefficient for sex, while still negative, became insignificant. The interpretation of this finding is not obvious. On the one hand, it may mean that previous participants in programs were more adept at obtaining a slot in another program, and since women were less likely to have had that prior experience, they fared worse than their male counterparts. On the other hand, it may mean that sex differences in participation continue to exist and are similar in nature to those in existence prior to 1978 and the lagged variable is picking up this connection.

To the extent that it exists, differential participation by women does not seem to be related to perceptions about future participation in the labor market. None of the variables that were used to measure work expectations proved to be significant. In contrast to women who entered private or military training, women in government programs were no less likely than nonparticipants to think that a woman's place is in the home. Therefore, there is no evidence to indicate that women who enter government programs have expectations of greater labor force attachment than those who do not or that different attitudes about work might explain why there are differences in participation between young men and young women. The presence of dependents is negatively correlated with participation for both men and women.

In general, the variables that are important in explaining participation are the same for men and for women. For the most part, the relationships are consistent with a "scraping" hypothesis rather than a "creaming" hypothesis. The probability of participation is negatively correlated with total family income and socioeconomic status (measured by father's education). It is positively correlated with prior enrollment in remedial education, with the number of periods of no work, with the number of months on welfare (for women), and with being black or Hispanic. We found no evidence to indicate that the women who entered government programs were better qualified than their male counterparts.

PROGRAM TREATMENT AND PROGRAM OUTCOMES

An analysis of female participation in employment and training programs would be incomplete without an assessment of the treatment young women receive, how it differs from that of young men, and the effects of those treatments on some set of outcomes. This section focuses on analyses that have been done in this area. Although a variety of data sources were used, most analyses relied on information available from the CLMS and from the 1979 NLS because those data sets include enrollees in different types of employment and training programs and also provide information on groups who have not participated in programs.

TABLE 7 Summary of Ordinary Least-squares Runs on Participation in Government Training, Post-1978, With Lagged Participation Variables

	Full Sample		Males		Females	
	B[a]	F Statistic	B	F Statistic	B	F Statistic
AGE79[b]	-.014	15.55*	-.017	13.35*	-.009	2.93**
BLACK	.101	74.89*	.092	31.18*	.111	43.84*
HISPANIC	.062	19.36*	.032	2.62	.090	20.47*
OTHERACE	-.011	0.36	.006	0.05	.023	0.81
FAMINCOME	-.003	38.36*	-.003	28.98*	-.002	9.52*
SEX	-.011	1.37	--	--	--	--
EMPLOYRATE1	.011	1.55	.014	1.16	.008	0.35
EMPLOYRATE2	.101	10.90*	.113	7.08*	.096	4.74***
MARRIED	.047	1.34	-.063	0.90	-.038	0.53
DIVORCED	-.091	3.46**	-.089	0.92	-.090	2.37
DEPENDENTS	-.058	9.82*	-.043	3.03**	-.078	7.66*
HIGHGRADE1	-.023	2.35	-.025	1.47	-.022	1.10
HIGHGRADE2	-.017	0.67	-.030	1.10	-.010	0.13
WORKEXPECT	-.001	0.00	-.018	0.39	.018	0.42
NOWORK	.041	58.17*	.038	28.30*	.043	28.14*
LIVEWITH1	-.024	0.82	-.048	1.55	.006	0.03
LIVEWITH2	-.013	0.09	-.041	0.46	.023	0.15
LIVEWITH3	-.080	9.91*	-.122	11.08*	-.035	0.97
FATHERGRAD1	-.031	7.76*	-.033	4.67***	-.029	3.39**
FATHERGRAD2	-.042	9.69*	-.042	5.08***	-.046	5.49***
MOTHERWORK1	-.011	0.77	.002	0.01	-.027	2.20
MOTHERWORK2	-.001	0.00	.013	0.44	-.016	0.64
FEMALEWK14	-.027	5.65***	-.023	2.04	-.030	3.45**
FAMILYATT	.001	0.01	.002	0.05	-.002	0.05
REMEDIAL	.036	8.25*	.023	1.97	.053	7.57*
MOSWELFARE	.006	4.69***	.003	0.25	.007	4.69***
GOVTPRE78	.219	214.62*	.216	112.87***	.220	97.52*
PRIVPRE78	.025	0.88	.013	0.12	.042	1.21
CONSTANT	0.478		0.596		0.318	
NUMBER	6,172		3,208		2,964	
R^2	.14		.15		.13	

*F significant at .01 level.
**F significant at .10 level.
***F significant at .05 level.

[a] Unstandardized coefficient.
[b] Variable names on following page.

SOURCE: M.C. Simms and M.L. Leitch (1983).

TABLE 7 (continued)

Variable Definitions

AGE79	respondent's age in 1979
BLACK HISPANIC OTHERACE	respondent's race; white is the omitted variable
FAMINCOME	total family income of respondent's household in 1978
SEX	respondent's sex
EMPLOYRATE1 EMPLOYRATE2	1979 unemployment rate for labor market of current residence; rates under 6 percent is omitted variable
MARRIED DIVORCED	marital status, single is omitted variable
DEPENDENTS	number of dependents in 1978
HIGHGRADE1 HIGHGRADE2	highest grade completed by respondent in 1978; less than high school is omitted variable
WORKEXPECT	work expectations in 5 years
NOWORK	periods of no work in 1978
LIVEWITH1 LIVEWITH2 LIVEWITH3	who individual lived with at age 14
FATHERGRAD1 FATHERGRAD2	highest grade completed by respondent's father; less than high school is omitted variable
MOTHERWORK1 MOTHERWORK2	number of hours respondent's mother workedin 1978; zero hours omitted
FEMALEWK14	adult female in household worked for pay when respondent was 14

TABLE 7 (continued)

FAMILYATT	respondent's attitude toward the statement "a woman's place is in the home"
REMEDIAL	whether respondent took remedial math or English or English as a second language
MOSWELFARE	months on welfare
GOVTPRE78	participated in a government-sponsored employment and training program before 1978
PRIVPRE78	participated in a private employment and training program before 1978

It should be noted that analyses using these data sets examined treatment of and outcomes for individuals who were enrolled in government-sponsored employment and training programs in the late 1970s. There are two reasons for this. First, there is generally a lag between the time data are collected and the time data sets are made available for use. This lag may be up to two years in some cases. Second, if one wants to examine postprogram outcomes, additional time must elapse so the enrollee can leave the program and follow-up data can be collected on the status of the participant at various points after leaving the program. Consequently, postprogram data on employment, earnings, and other outcomes for a person leaving a training program in 1978 might be collected in 1979 and 1980 and be available for analysis in 1981. These lags make it difficult to measure the effectiveness of current programs if they are different from those offered in the recent past. However, evaluation of past programs can be helpful in identifying patterns of treatment and in determining whether some types of programs are more effective than others.

Program Treatment

Three aspects of program treatment are of interest: program assignment, services received, and type of training received. The type of activity an individual is assigned to and the training received can affect postprogram outcomes. Support services, such as medical care, transportation, and child care, can affect the ability of an individual to enter or continue a program.

Program Assignment

Employment and training programs consist of four basic activities: classroom training; on-the-job training (OJT); public service employment (PSE), which was discontinued in 1981; and work-experience programs. There are differences in the assignment of men and women to these activities. Although the differences are greater among adults, they do exist among youths. Young women are more likely than young men to be assigned to work-experience and classroom-training activities and are less likely to be assigned to OJT and (prior to 1981) PSE (Table 8). These differences are more apparent among youths over age 18, since those under age 18 are most likely to be in work-experience programs, regardless of gender. Sex differences are slightly greater among whites than among blacks or Hispanics because minorities of both sexes tend to be more likely to be placed in work-experience programs or classroom training after the age of 18.

Differences in program assignment do not necessarily represent discriminatory treatment. They may be based on differences in the type of treatment deemed appropriate, given the individual's background, or they may be the result of differences in preferences between men and women. In their analysis of the type of skills training received, researchers at Ohio State University noted that young women in the NLS sample were more likely to receive classroom training--be it college preparatory, skills training, or basic education--and men were more likely to receive on-the-job training (Borus, 1983:126). They thought that these differences could stem from preferences on the part of young people; young women do better in school and are therefore more likely to accept such an assignment. However, this would certainly be at odds with a strategy of assigning enrollees on the basis of need, since male enrollees tend to have more educational deficiencies than female enrollees. An alternate explanation may be found in the fact that the type of jobs traditionally held by women are more likely to require skills that are learned in the classroom and those held by young men are more likely to be learned on the job.

A Rand Corporation study of sexual equity in CETA (based on the CLMS) used a different approach to evaluating the gender differences in program assignment (Berryman et al., 1981). This study compared the proportion of males who received the CETA services they requested to the proportion of females who received the services they requested. Although the differences between young men and young women were smaller than the differences between adult men and adult women, some patterns were found. In the categories of job training and jobs, men who requested OJT and PSE were more likely to get those assignments than women who requested them. On the other hand, young women who requested classroom training in basic skills were more likely to get it than young men who requested it (Table 9).

TABLE 8 CETA Program Activity by Race, Age, Ethnicity, and Sex, Fiscal 1977 (in percentages)

	Males						Females					
Age	Classroom Training	On-the-Job Training	Public Service Employment	Youth Work Experience	Multiple	Other[a]	Classroom Training	On-the-job Training	Public Service Employment	Youth Work Experience	Multiple	Other[a]
White												
13-15	2.16	--	3.19	77.55	.91	16.19	1.48	.36	3.23	81.29	.10	13.56
16-17	4.16	2.56	4.23	77.36	2.12	9.58	2.03	2.09	1.72	78.79	3.07	12.31
18-19	11.27	10.84	18.17	41.29	8.02	10.41	23.72	8.59	14.72	37.92	5.53	9.51
20-22	14.65	12.79	29.13	19.89	5.90	17.63	22.35	8.24	21.92	22.75	6.17	18.57
Black												
13-15	4.56	.82	.12	79.91	.26	14.33	5.22	--	--	64.61	.04	28.81
16-17	1.05	1.05	2.43	77.32	1.53	16.63	3.86	.23	1.81	66.27	3.09	24.73
18-19	10.35	4.16	6.56	50.72	1.92	26.30	15.73	1.92	7.65	54.61	1.72	18.38
20-22	15.47	5.82	24.45	17.86	6.30	30.11	22.08	4.79	13.78	26.10	3.26	29.99
Hispanic												
13-15	2.91	--	--	70.44	.39	26.27	--	.58	--	85.05	3.45	10.92
16-17	6.74	.97	1.73	65.20	1.61	23.75	.67	.65	.11	82.75	--	15.83
18-19	16.73	12.97	4.57	33.12	6.78	25.83	14.57	6.33	7.02	52.25	2.74	17.08
20-22	21.24	11.52	18.38	6.60	16.60	25.65	34.92	8.42	19.50	7.13	5.31	24.72

[a] Includes adult work experience, direct referral, and none.

SOURCE: L.J. Bassi, M.C. Simms, L.C. Burbridge, and C.L. Betsey (1984).

BEST COPY AVAILABLE

TABLE 9 Youth Distribution of Obtained CETA Services within Desired Service (in percentages)

In-Program Assignment	Sex	Basic Skills			Job Training			Job		
		FY76	FY77	FY78	FY76[a]	FY77	FY78	FY76[a]	FY77	FY78[a]
Classroom training (CT)[b]	Male	37.3	55.8	71.0	35.3	42.7	43.1	9.1	8.0	8.0
	Female	81.4	74.1	71.8	34.8	54.6	52.5	8.6	10.5	11.6
On-the-job training (OJT)[c]	Male	4.4	2.3	3.4	8.6	9.7	12.1	7.2	10.6	8.1
	Female	3.5	1.5	2.7	3.7	4.2	5.7	4.5	6.3	6.2
Youth work experience (YWE)[d]	Male	56.8	41.4	22.3	50.3	39.2	35.1	63.4	52.5	56.8
	Female	15.1	22.6	23.4	51.9	36.2	36.6	74.4	63.2	63.6
Public service employment (PSE)[e]	Male	1.5	0.5	3.3	5.8	8.4	9.7	20.3	28.9	27.1
	Female	0.0	1.8	2.1	9.5	5.0	5.2	12.4	20.0	18.7

NOTE: Includes only participants who expressed their desired CETA services.

[a] Totals do not add to 100.0 due to rounding.
[b] Includes CT and YETP CT in fiscal 1978.
[c] Includes OJT and YETP OJT in fiscal 1978.
[d] Includes YWE, YETP Other, and YCCIP in fiscal 1978.
[e] Includes PSE sustainment, PSE nonsustainment, and PSE unknown in fiscal 1978.

SOURCE: S.E. Berryman, W.K. Chow, and R.M. Bell (1981:67).

Occupational Segregation

Both the Rand study and the Ohio State analysis found considerable segregation in occupational training under CETA and other government programs. Among youths enrolled in employment and training programs in 1978, Crowley et al. (Borus, 1983:20, 162-163) found that 80 to 85 percent of all enrollees in professional, clerical, and sales training programs were women, while 78 percent of the enrollees in skilled labor and craft training were men. The low percentage of women in the latter programs is not unexpected given that only 25 percent of women in the 1979 NLS survey aspired to atypical jobs. And among those young women who were interested in nontraditional jobs, most were interested in managerial and professional careers; few indicated an interest in blue-collar jobs. Young women from more disadvantaged families, who are the target group for government programs, are less likely to aspire to nontraditional occupations and, without encouragement, may be unlikely to pick employment or training slots in traditionally male fields.

Berryman et al. (1981:44-45) also found CETA enrollees to be very traditional in their job preferences, although that seemed to decrease somewhat with time. In 1976, 82 percent of the young women wanted traditionally female jobs and only 4 percent wanted traditionally male jobs. The remaining 14 percent wanted jobs that were categorized as mixed (neither predominately male nor predominately female). By 1978, the proportion wanting traditionally female jobs dropped to 60 percent, those desiring traditionally male jobs rose to 15 percent, and those seeking mixed jobs rose to 24 percent. Over the same period, CETA began to place more young women in traditionally male jobs and fewer in traditionally female jobs, and the shifts were greatest for minority females.

Supportive Services

The service received most often by youths is job counseling. About one-half of both men and women received counseling. Medical services, transportation, and child-care services were not received by large proportions of the youth population, but the need for such services among the youth population is not known. Female heads of household were more likely to receive health and child-care services than others, but less than one-half of that group received any services in 1978 (Borus, 1983; Simms and Leitch, 1983).

Program Outcomes

The expected outcomes of program participation have been and continue to be diverse. In addition to increased postprogram earnings (the primary goal for adults), other objectives include increased educational attainment (lower school dropout rates), a reduction in early childbearing, reduced welfare dependency, and reduced criminal activity. Success in achieving these multiple goals, however, is often difficult to measure.

To assess the net impact of program participation, information is needed on the outcomes and variables, other than program participation, that are likely to affect outcomes for both the preprogram and postprogram periods. Moreover, comparable information is needed for a group of individuals who have similar preprogram characteristics but who were not enrolled in the program. Such comprehensive information is seldom available. Therefore, the outcomes examined most often are postprogram earnings and employment because more data are available on those outcomes, both for program participants and for individuals who may be part of a comparison group.

Earnings and Employment Gains

One fairly consistent conclusion, at least in evaluations of outcomes for adults, is that women and the economically disadvantaged receive the greatest gains from participation in employment and training programs.[2] This was true for the early programs established under MDTA and has continued to be true under CETA (Perry et al., 1975; Bassi, 1982; Congressional Budget Office and National Commission for Employment Policy, 1982). There is no consistency, however, in the assessment of which program activities have the greatest effect or the mechanism by which those gains are made. For example, some studies conclude that OJT and skills training have the highest payoffs (Harlan, 1980), but other studies point out that the employment gains of those two programs decay over time (U.S. Department of Labor, 1977). A recent study using the Continuous Longitudinal Manpower Survey, however, found that the net earnings gains for women do not vary by program activity but are in the range of $800 to $1,300 for all programs. Moreover, the gains do not appear to decrease over time (Congressional Budget Office and National Commission for Employment Policy, 1982).

Findings from a recently completed study by The Urban Institute (Bassi et al., 1984), which used the 1977 CLMS, indicate that many of the programs that work for adults also work for youths. Participation in PSE programs increased earnings for white women by $882 to $990 in the first postprogram year and by $1,035 to $1,144 in the second postprogram year.[3] For black women in PSE the gains were $1,126 to $1,196 in the first year and $608 to $678 in the second postprogram year, and for Hispanic women in PSE the significant gain was $1,705 to $1,862 in the first postprogram year. Black women also benefited from participation in OJT; they showed gains of $861 to $877 in the first year and of $1,389 to $1,406 in the second year after leaving the program. The only significant gain for men was for white men in OJT, who experienced an increase in earnings of $452 to $463 in the first postprogram year. Most of the gains for women were the result of increases in time in the labor force, time employed, and hours worked; only 3 to 10 percent of the gains were attributable to increased average hourly wages. A larger proportion of the gains for white men (16 percent) was attributable to increases in hourly wages and less to additional time employed. Even though women benefited more from CETA participation in terms of gains in earnings, mean postprogram Social Security earnings for young women were lower than those for young men.

Youths in other programs either showed no gain or a loss in earnings compared with a matched sample drawn from the CPS. However, even individuals in those programs increased their labor force activity between preprogram and postprogram years and showed gains in reported hourly wages. It would appear that the participants' failure to make gains relative to the comparison group is due to the fact that the increases in labor force activity of CETA participants are not as large as the gains made by nonparticipants. This may or may not be the result of non-labor-market activity, such as time spent in school. It is impossible to confirm these assumptions, since no postprogram information on the labor force activity or school status of members of the comparison group was available.

---

[2] Note that some of the studies cited measured gross earnings and/or employment impact, and others measured net earnings and/or employment gains (using a control group). This changes the magnitude but not the sign of the results for women.

[3] However, these findings are not definitive since the Chow tests indicated a significant difference between young white women who participated in CETA and their comparison group.

Using the 1976 CLMS to measure the effect of program activity on employment immediately after leaving the program, Harlan and Hackett (1984) found that programs that enrolled more men than women (such as OJT) provided the greatest possibility for immediate postprogram employment and that those with the largest proportion of women had the lowest possibilities. If population groups were shifted among programs so that minorities and women were distributed like white men, postprogram employment for those groups would increase, although it would still lag that for white men. (No separate analysis was done for youths.)

Hahn and Lerman (1983) used the NLS to analyze the effect of CETA programs on school enrollment and unsubsidized job experience. They found that while CETA did seem to increase school enrollment among women and nonwhite men, it had very little positive effect on unsubsidized employment. Youths who had not been enrolled in CETA had higher rates of unsubsidized employment and had higher earnings from unsubsidized employment. This was especially true for women, although young female CETA participants who mixed school and work had higher unsubsidized earnings per week in the first year. By 1980 young female CETA participants who were both in school and working were more likely to have unsubsidized jobs than their non-CETA counterparts.

Other Outcome Measures

Very little information on outcome measures other than employment and earnings is available on CETA activities as a group. Bassi et al. (1984) did examine the effect of CETA on welfare dependency for CETA enrollees in 1977 who were between the ages of 18 and 65. The results of the analysis show that CETA does decrease the level of welfare dependency, but it does not lead to removal from the welfare rolls (at least not under the regulations in force in 1978 and 1979). In 1978 the estimated annual welfare savings for women who headed households was $250. This finding is consistent with the fact that women received the highest gains in earnings from CETA participation. No significant welfare savings were found for men. This is consistent with the finding that there was not, in general, a substantial gain in earnings for men.

A recently completed analysis of the long-term effects on youths of government-subsidized employment and training programs used the NLS to examine the impact of participation in five program activities (subsidized employment, classroom skills training, basic education, job counseling, and other) on employment, earnings, educational attainment, and welfare dependency (Crowley, 1984). The effect of participation in

1978, 1979, or 1980 on 1981 status or outcomes was found to be insignificant for earnings and hourly wages for both men and women, although it seemed to lead to subsidized employment at a later date. Participation in a basic educational program was positively related to obtaining a General Equivalency Diploma (GED) for both men and women and to school enrollment for women. Participation in a skills training program had a negative effect on subsequent school enrollment for young women. Young women who received job counseling (in 1979) or participated in subsidized employment programs (in 1980) actually were more likely to be on welfare and to receive larger amounts of welfare than nonparticipants. This could be related to greater knowledge of the benefit programs to which they might be entitled. Women who were in programs in 1978 had lower levels of dependency on welfare in 1981, which indicates a possible lag between program participation and movement off welfare among younger women.

There have been some evaluations of the effect of individual employment and training programs on a variety of outcome measures. One such study is the evaluation of the Job Corps conducted by Mathematica Policy Research Corporation (Mallar et al., 1980). This study found that in addition to increasing employment and earnings, Job Corps also increased the probability of high school completion and college enrollment and decreased criminal behavior and welfare dependency. For young women, participation in Job Corps also appeared to delay family formation and to reduce the incidence of extramarital childbearing. The impact on employment, earnings, education, and welfare payments was greater for women without children than for those with children. This may be due to the fact that the burden of family responsibilities on those with children limited their labor force participation after leaving the program.

Another program for which a variety of outcome measures has been evaluated is the Youth Incentive Entitlement Pilot Projects (YIEPP). This program, initiated under YEDPA, guaranteed jobs to eligible 16- to 19-year-olds (part-time jobs during the school year and full-time jobs during the summer) if they stayed in or returned to school and met specified attendance and performance standards. A comparison of men and women eligible to participate found that the participation rates for young men and young women were quite similar and so were the average number of months in the program (Farkas et al., 1984). There were substantive gains in earnings for both men and women during program participation, mainly due to increased employment. However, the difference in earning gains between young women and young men in the postprogram period was significant--gains in weekly earnings for men ($13.66) were twice those for women. Since nearly one-half of the young women in YIEPP had had at least one child by the time they reached the age of 19, it was thought that home responsibilities may have had a negative effect on labor force participation among women. However, the rate of childbearing, while quite high, varied substantially from site to site within YIEPP, and on average, the 45 percent rate for YIEPP participants was comparable to the 47 percent rate for the comparison group. The study concluded, therefore, that the program had no effect on the rate of childbearing among this group of young, low-income women and that the high rate of childbearing probably explained at least part of the difference in earnings gains between male and female participants in YIEPP. The latter conclusion seems to be consistent with the fact that the gap between the weekly earnings of men and women in the program increases as they grow older. Even though the gains to young women are smaller than those to young men, however, female program participants still do better than women in the comparison group.

While YIEPP did increase labor force participation and lower unemployment, it did not seem to increase school enrollment. This may have been due, in part, to the failure to attract or retain high school dropouts. However, the program did not appear to increase dropout rates either (which had been true of some other programs), since there was a school enrollment requirement.

A program that puts less emphasis on job training, per se, and more emphasis on a system of supportive services is Project Redirection, jointly sponsored by the Ford Foundation and the U. S. Department of Labor. This program sponsors or brokers services for pregnant teenagers and teenage mothers (under age 18) who are without high school diplomas and who are in welfare families. The final report on the impact of Project Redirection has not been released yet but findings from the 12-month follow-up study indicate positive results from program participation in terms of employment and education, with slight decreases in the incidence of pregnancy (Polit et al., 1983). Since 12 months is a short follow-up period for evaluating program outcomes, especially since many individuals were still enrolled in the program, the findings must be regarded as tentative. What may be of greater interest is that the program provides an effective set of support services, such as child care and housing assistance, that frequently are not available in other programs and are obviously felt to be needed by teenage mothers.

SUMMARY AND CONCLUSIONS

Government employment and training programs have been utilized by both young men and young women over the past 20 years. While differences in participation based on sex were quite clear during the early years, they are less clear now. A review of young women's participation in government-sponsored employment and training programs reveals that the level of participation has increased in recent years to a level approaching parity in most programs, although a few programs, like Job Corps, still lag the others. Although young women who enroll in government programs have somewhat higher educational levels than young men, this appears not to be a significant factor in program enrollment. The factors that affect young women's enrollment appear to be quite similar to those that affect young men. However, there still appear to be differences in the treatment received by young women and young men. Women are more likely to be involved in classroom training or work-experience programs that are less likely to integrate them into the job market, and they continue to be trained in traditionally female occupations. Few young women receive supportive services other than counseling, and even women with children receive low levels of support in terms of child care.

Young women, like their adult counterparts, benefit more from participation in employment and training programs than do young men. They receive higher employment and earnings gains from the activities in which they are least likely to be assigned, such as on-the-job training and public service employment. Most of these gains come from increased time employed, however, and not from higher wage rates. Evaluations of selected programs, like Job Corps, also reveal gains in such areas as educational attainment, reduced welfare dependency and criminality, and delayed family formation. Women with children seem to benefit less from the programs than those without children, perhaps because family responsibilities prevent them from increasing their postprogram labor force participation.

This review of studies of young women's participation in employment and training programs has identified several shortcomings in both our knowledge and in the operation of employment and training programs. These shortcomings prompt the following research recommendations:

1. Relatively little is known about the effects of employment and training programs on nonemployment outcomes, such as educational attainment, welfare dependency, and childbearing patterns. For youths, especially young women, these outcomes may have greater long-term economic consequences than the impact programs may have on short-term employment and earnings. Therefore, more research should be done on nonemployment outcomes and their link to long-term employment and earnings gains. While the 1979 NLS has advantages as a data set because it includes nonparticipants in the sample, precise information on the programs in which the enrollees participated is scanty. Program-based data sets, such as the CLMS or the new JTLS, will provide better information on programs and services received. However, the CLMS comparison group (drawn from the Current Population Survey) lacks longitudinal information on outcomes other than participants' earnings. It is to be hoped that the Job Training Longitudinal Survey (JTLS) data base, to be developed under JTPA, will not have the same shortcomings. In the interim period before the JTLS is available, it would be possible to conduct research on nonemployment outcomes by drawing a comparison group from the NLS for use with the late CLMS cohorts (1979 and later), since information is available for roughly comparable periods.

2. Another area in which we lack knowledge concerns the low level of support services provided to youths. For example, is child care not provided because it is not requested or because it is not available? To what extent does nonavailability of child-care services or transportation reduce program participation, especially among young women? [An on-going Urban Institute study (Sonenstein and Wolf, 1985) will provide insight into the relationship between the availability of child care and employment or participation in education or training programs.]

In terms of program operation, there are also suggestions for change.

1. The fact that young women are assigned to different programs than young men (and disproportionately to those with lower expected earnings gains) suggests that program operators need to be more sensitive to possible gender differences in program assignment and that more emphasis on preprogram counseling might be needed.

2. Related to the above, while today's young women are more likely to expect to be working during their adult lives than earlier generations of young women, they are not as open to nontraditional careers as they need to be if they are to increase their earning power significantly. Employment and training programs (particularly job counseling programs) should include information about job opportunities in nontraditional careers and the skills and education needed to enter those careers. Support and encouragement may also be needed to get more young women into the training "pipeline" for those occupations.

3. Low-income young women have relatively high birth rates during their teenage years. While little is known about the effect of participation in employment and training programs on subsequent childbearing, we do know that young women with children are less likely to participate in programs and may receive lower benefits from participation. More emphasis needs to be placed on outreach and on facilitating the participation of young mothers in programs. Moreover, support services (like child care) need to be available to these women after they leave programs in order to increase their postprogram labor force participation.

REFERENCES

Bassi, L.J.
1982 CETA--Is It a Cost-Effective Method for Increasing the Earnings of Disadvantaged Workers? Washington, D.C.: The Urban Institute.

Bassi, L.J., M.C. Simms, L.C. Burbridge, and C.L. Betsey
1984 Measuring the Effect of CETA on Youth and the Economically Disadvantaged. Washington, D.C.: The Urban Institute.

Berryman, S.E., W.K. Chow, and R.M. Bell
1981 CETA: Is It Equitable for Women? Santa Monica, Calif.: Rand Corporation.

Borus, M.E.
1983 Tomorrow's Workers. Lexington, Mass.: Lexington Books.

Burbridge, L.C.
1983 Employment and Training Programs for Youth: An Interpretation and Synthesis for Measured Outcomes. Washington, D.C.: The Urban Institute.

Congressional Budget Office and National Commission for Employment Policy
1982 CETA Training Programs: Do They Work for Adults? Washington, D.C.: U.S. Government Printing Office.

Crowley, J.E.
1984 Long-term outcomes of government-subsidized employment and training programs. Pp. 179-212 in P. Baker, S. Carpenter, J.E. Crowley, R. D'Amico, C. Kim, W. Morgan, and J. Melgosz, eds., *Pathway to the Future*. Vol. IV. Center for Human Resources Research. Columbus: Ohio State University.

Farkas, G., R. Olsen, E. Stromsdorfer, L.C. Sharpe, F. Skidmore, D.A. Smith, and S. Merrill
1984 *Post-Program Impacts of the Youth Incentive Entitlement Projects*. New York: Manpower Development Research Corporation.

Hahn, A., and R. Lerman
1983 *The CETA Youth Employment Record: Representative Findings on the Effectiveness of Federal Strategies for Assisting Disadvantaged Youth*. Final report to the U.S. Department of Labor. Center for Employment and Income Studies. Waltham, Mass.: Brandeis University.

Harlan, S.L.
1980 *Sex Differences in Access to Federal Employment and Training Resources under CETA: An Overview*. Working Paper no. 58. Wellesley, Mass.: Wellesley College Center for Research on Women.

Harlan, S.L., and E.J. Hackett
1984 *Job Training Programs and Employment Outcomes: Effects by Sex and Race of Participants*. Working Paper no. 129. Wellesley, Mass.: Wellesley College Center for Research on Women.

Mallar, C., S. Kerachsky, C. Thornton, M. Donihue, C. Jones, D. Long, E. Noggoh, and J. Schore
1980 *Evaluation of the Economic Impact of the Job Corps Program*. Second Follow-up Report. Washington, D.C.: U.S. Department of Labor.

Perry, C.R., B.E. Anderson, R.L. Rowan, and H.R. Northrup
1975 *The Impact of Government Manpower Programs*. Philadelphia: University of Pennsylvania.

Polit, D.F., M.B. Tannen, and J.R. Kahn
1983 *School, Work, and Family Planning*. New York: Manpower Demonstration Research Corporation.

Simms, M.C., and M.L. Leitch
1983 *Determinants of Youth Participation in Employment and Training Programs with a Special Focus on Young Women*. Washington, D.C.: The Urban Institute.

Sonenstein, F.L., and D.A. Wolf
1985 *Child Care Policies and Employment Behavior of Welfare Mothers*. Washington, D.C.: The Urban Institute.

Stromsdorfer, E.W.
1980 The effectiveness of youth programs: an analysis of the historical antecedents of current youth initiatives. Pp. 88-111 in B.E. Anderson and I.V. Sawhill, eds., *Youth Employment and Public Policy*. Englewood Cliffs, N.J.: Prentice-Hall.

Swinton, D.H., and L.C. Morse
1983 The Source of Minority Youth Employment Problems. Washington, D.C.: The Urban Institute.

Taggart, R., and B. Linder
1980 Youth employment policy background material. In Vice President's Task Force on Youth Employment, A Review of Youth Employment Problems, Programs, and Policies. Vol. 2. Washington, D.C.: U.S. Government Printing Office.

U.S. Department of Labor
1977 The Work Incentive (WIN) Program and Related Experiences. Washington, D.C.: U.S. Government Printing Office.

Index

A

ACTION, 79, 80, 96, 315, 319
Adkins Employability Skills Series Program, 126
Agriculture Department, 74, 79, 97
Alternative Youth Employment Strategies, 11, 120-123, 135
  Albuquerque, 120
  Miami, 120
  New York City, 120
American Preparatory Institute Program, 126
Angrisani, Albert, 330
Apprenticeship Training, Bureau of, 116
Assistant Secretary for Policy Evaluation and Research, Office of, 81, 97, 287, 301, 302, 317

B

Barnicle, Tim, 329
Benefit-cost analyses, 16, 31
  See also Job Corps; Supported Work
Black employment, 34-68, 367-409
  See also Employment and unemployment; specific programs
Borus, Michael, 335
Brandeis University Center for Employment and Income Studies (CEIS), 6, 81, 97, 99, 165, 178, 265-270, 304, 317, 320, 324, 330, 332, 334
Brandwein, Seymour, 301, 309
Briggs, Vernon, 326
Budgets and appropriations, see Funding and expenditures; specific programs
Butler, Erik, 323, 327, 328

C

Califano, Joseph, 298
Career Exploration Program, OIC/A, 12, 127-131, 135
Career Intern Program, 84, 88
Carp, Bert, 298
Carter administration, 1, 69-72, 281, 289-299, 328-329
Census Bureau, 254
Center for Employment and Income Studies (CEIS), see Brandeis University Center for Employment and Income Studies
Center for Studies in Social Policy, 130
Civil Rights Act of 1964, Title VII, 57
Community-based organizations (CBOs), 72, 85, 87-88, 295
Community Services Administration, 79, 80, 96, 314, 315, 319
Comprehensive Employment and Training Act (CETA), 69
  expenditures, 75
  public service employment 70-71, 73, 297
  service delivery system 294-296, 323-324

- YEDPA integration, 71-72, 292
Computer-assisted education, 126
Conference of Mayors, U.S., 82, 317
Consolidated Youth Employment Demonstration Project, 92, 311
Continuous Longitudinal Manpower Survey (CLMS), 6, 31-32, 97, 175-178, 254-264, 274
Corporate Career Demonstration Projects, 91
Corporation for Public/Private Ventures, 6, 81, 164, 314, 315, 318
Corporation for Youth Enterprises, 6, 81, 314, 315, 318
Cranston, Alan, 289
Criminal activity, YEDPA programs effect on, see Job Corps

D

Darr, Jim, 328
Data bases, 321
- CLMS, 6, 31-32, 97, 175-178, 254-264, 274
- JTLS, 31-32
- NLS, 6, 97, 175-176, 178, 254-258, 264-274
- SAS, 97, 175, 180-181, 193-219, 320-321

Davis-Bacon Act, 85, 90
Delivery systems, see Service delivery
Demography
- childbearing and marital patterns, 59
- youth cohort size, 2, 58-60, 67

Demonstration projects, 91
- needs assessment, 92
- political background, 71, 291-293, 312
- purpose and funding, 69, 77-83
- See also Youth Incentive Entitlement Pilot Projects; specific programs

Department of, see specific departments
Discrimination
- legislation prohibiting, 57
- overview, 55-56
- social context of, 64-65, 348-366

Disemployment and displacement, 54-55, 57, 72, 150-151, 155-157, 159, 294
Dropouts, see Out-of-school youths; specific employment programs

E

Earnings and wages
- discrimination in, 56
- minimum wage laws, 54-55
- prevailing wage issue, 294
- reservation wage, 14, 62
- subminimum wage, 294
- youth/adult earnings ratio, 51-52
- See also specific programs

Economic changes, 53-54
Edelman, Peter, 327
Edes, Nik, 289, 291
Education, see School enrollment
Educational attainment, YEDPA programs effect on, see specific programs
Educational Testing Service, 6, 82, 97, 180, 320-321
Employment and Training Administration, 70, 73, 99, 281, 299
Employment and unemployment
- demand for labor, 53-58, 62-63
- early unemployment, effects, 64
- earnings figures, 51-52
- employment-to-population rates, 2, 38-39, 65-67
- entry into labor force, 49-51
- family background effects, 63-64
- frictional wage-search unemployment, 373-374

  Hispanic youth, 410-461
  inactivity rates, 46-49
  in-school and out-of-school youth employment, 40-43
  job turnover figures, 49-51
  labor force participation rates, 43-46
  overview, 1-2, 52, 67-68, 369-376
  racial differences, statistical analysis of 1980 Census data, 367-409
  seasonal and cyclical unemployment, 370-373
  social background effects, 64-65, 348-366
  structural unemployment, 374-376
  supply of labor, 58-63
  unemployment rates, 34-38, 65
  youth cohort size effects, 2, 58-60, 67
Employment programs
  economic and racial isolation of, 88-89
  effectiveness estimates derived from national data bases, 97, 175-181, 254-280
  evaluation procedures, 3-4, 99-107, 220-230
  improvement of evaluation methods, 231-243
  improvement of quality and interpretability of evaluation reports, 243-246
  in-school programs design, 26-27
  jobs creation achievement, 21
  JTPA framework, 28-30
  local implementation, 6-7, 83-84
  matching of needs and services, 91-92
  planning and assembling of, 84-86
  quality monitoring, 92-93
  school dropouts' needs, 23-26
  school systems' relationship, 22-24, 33, 84-85
  staffing and organizing activities, 90-91
  social context, 348-366
  target groups, 105-106
  targeting, recruiting, and enrolling participants, 7-8, 86-89
  types and goals, 103-105
  young women's participation, 27-28, 462-485
  See also specific programs
Employment Service, U.S., 82, 88
Energy Department, 79, 80, 97, 316, 319
Entitlement program, *see* Youth Incentive Entitlement Pilot Projects
Equal Pay Act of 1962, 57
Esch, Marvin, 291
Executive Order 11246, 57
Expenditures, *see* Funding and expenditures; *specific programs*

F

Family influences, 63-64
Federal agencies
  interagency agreements, 6, 79, 80, 96-97, 315-316, 318-319
  intraagency projects, 6, 81-82, 97, 316-317, 319
  program recruitment efforts, 88
Female employment, *see* Employment and unemployment; *specific programs*
Financial assistance, 26
Funding and expenditures
  CETA expenditures, 75
  YEDPA annual appropriation, 1, 69-70, 281
  YEDPA discretionary and demonstration projects, 77-83
  YEDPA expenditures, 73-77
  See also specific programs

G

Gililand, Richard, 330
Glynn, Tom, 327
Green, Ernest, 289
Gutman, Robert, 333

H

Hahn, Andrew, 308-309, 318, 321, 330, 334
Hausman, Leonard, 308
Hawkins, Augustus, 291
Health, Education, and Welfare Department (HEW), 79, 80, 96-97, 298, 316, 319
Health status of program participants, 112
Higgins, Kitty, 327
Hispanic employment, 68
  immigrant labor, 58-59
  See also Employment and unemployment; specific programs
Housing and Urban Development Department (HUD), 79, 80, 96
Humphrey, Hubert, 289, 290

I

Immigrant labor, 58-59
Income maintenance program effects, 55
In-school youths, see School enrollment
Interagency agreements, 6, 79, 80, 96-97, 315-316, 318-319
Interior Department, 74, 79, 97
Intermediary organizations, 6, 81, 83, 96, 314, 315, 318
Intraagency projects, 6, 81-82, 97, 316-317, 319

J

Jackson, Henry, 289, 290
Javits, Jacob, 289, 290
Job Corps, 69, 73, 102, 281, 296, 299, 335
  benefit-cost analyses, 110, 114
  criminal activity, effect on, 10, 110, 112, 114
  expenditures, 77, 283, 284
  participation figures, 78
  research design and results, 9-10, 16, 19, 110-116, 118
  target group, program approach, and administration, 74, 108, 109, 111, 282
Job Corps Educational Improvement Effort (EIE), 120-122, 126-127
  University of Florida, 126
  University of Kentucky, 126
Job Factory, 16, 161-163, 165-166
  Cambridge, Mass., 165
Job Factory Voucher Program, 161-163, 166-167
Job placement programs, 15-16, 105, 161-174
Job Track, 161-163, 167
  San Francisco, 167
Job Track II, 167
Job Training Longitudinal Survey Data Base (JTLS), 31-32
Job Training Partnership Act (JTPA), 28-30, 329, 333
Job turnover figures, 49-51
Jobs for America's Graduates, 16, 19, 168-170, 172, 174
  Northeastern University study, 168, 172
  Temple University study, 168, 173
Jobs for Delaware Graduates, 16, 131, 168-172, 174
Johnson, Richard, 289, 290, 300

K

Kennedy, Edward, 289
Knowledge development, see Youth knowledge development plan

L

- Labor Department, 1
  - intraagency projects, 6, 81, 97, 316-317
  - policy analysis capability, 287, 342-344
  - service delivery, 294-295
  - YEDPA mandate, 72, 281
  - demand factors, 53-58, 62-63
  - entry figures, 49-51
  - immigrants, 58-59
  - supply factors, 58-63
  - what constitutes, 43-44
  - women, 58-59
  - youth cohort size, 2, 58-60, 67
  - youth participation figures, 43-46
- Labor market preparation programs, 11-12, 105, 119-136
- Lerman, Robert, 301, 308

M

- Male employment, *see* Employment and unemployment; *specific programs*
- Management and Budget, Office of, 302, 309
- Manpower Demonstration Research Corporation, 6, 81, 83, 96, 314, 315, 324
- Marshall, Ray, 289, 299
- Mathematica Policy Research, Inc., 111, 179-180, 258, 274-277
- Military service, 57-58
- Minimum wage laws, 54-55
- Mixed Income Demonstration, 89
- Mondale, Walter, 298
- Monitoring of programs and services, 92-93

N

- National Association of Counties, 82, 317
- National Council for Negro Women, 82, 317
- National Council of La Raza, 82, 317
- National Council on Employment Policy, 82, 317
- National Governors' Association, 82, 317
- National Institute of Education, 79
- National Longitudinal Survey (NLS), 6, 97, 175-176, 178, 254-258, 264-274
- National Opinion Research Center, 254
- National Puerto Rican Forum (NPRF), 12, 82, 131, 317
  - Chicago, 131
  - Hartford, Conn., 131
  - Jersey City/Hoboken, N.J., 131
  - New York City (Bronx), 131
  - San Juan, P.R., 131
- National Urban League, 82, 295, 317, 321
- Needs assessment, 91-92
- Neighborhood Youth Corps, 335
- Nelson, Gaylord, 289, 290
- New Youth Initiatives in Apprenticeship, 10-11, 108-110, 116-118
- Nichols, Donald, 325
- Nonwhite employment, *see* Employment and unemployment; *specific programs*

O

- Occupational skills training programs, 9-11, 25-26, 105, 108-118
- Office of, *see specific offices*
- Ohio State University Center for Human Resource Research, 254
- Olympus Research Centers, 167
- Opportunities Industrialization Centers of America, Inc., 12, 130, 295
- Out-of-school youths
  - employment problems, 22-23, 61

  employment programs for, 9-13, 15-16
  employment rates, 2, 40-43
  program needs of, 23-26
  See also specific programs

P

Packer, Arnold, 309, 325
Palmer, John, 325
Perkins, Carl, 291
Pines, Marion, 323
Policy Evaluation and Research, Office of, 81, 97, 287, 301, 302, 316
Policy Research Group, 178, 265, 271-274
Poulard, Othello, 326
Pregnancy and childbearing, 8, 27-28
  Job Corps data, 115-116
Prevailing wages, 294
Private employers, 85, 86
Private industry councils, 28, 29
Program for Better Jobs and Income, 298
Project BEST, 131, 168-170, 172-173
Project Redirection, 12, 92, 127-129, 133-135
  Boston, 133
  New York City (Harlem), 133
  Phoenix, 133
  Riverside, Calif., 133
Project STEADY, 11, 88, 92, 120-122, 124-126, 135
Public Service Employment Program, 7, 73
Public Versus Private Sector Jobs Demonstration Project, 12, 85, 102, 137-139, 145-146, 159

R

Race differentials, see Employment and unemployment; specific programs
Randolph, Jennings, 289, 290
Reagan administration, 329, 330
Recruiting procedures, 7-8, 86-89
Recruitment Training Program (RTP) Career Exploration Program, 11, 82, 120-124, 135, 317
Remediation and Training Institute, 329
Research programs
  benefit-cost analyses, 16, 31, 110, 114, 144
  comparison and control group methodology, 17-18, 30, 274-277
  follow-up periods, 3, 19, 31. See also specific programs
  measures of implementation, 18-19, 30, 96-98
  recommendations for, 30-32, 231-253
  reports used, 83, 99-100, 220-230
  sample undercoverage and attrition, 20-21, 205-209
  as separate from service delivery, 32-33, 288, 340-342
  subjective measurements used as proxy variables, 19-20, 31, 180-181, 195-198, 200-202, 208-216
  See also Youth knowledge development plan; specific programs
Reservation wage, 14, 62
Rosen, Howard, 301, 309

S

Sample undercoverage and attrition, 20-21, 205-209
Sarasin, Ronald, 291
School enrollment
  dropout problem, 22-26
  education, effects on employment, 25, 61
  employment during, 2, 40-43

  employment programs for in-school youths, 10-16, 26-27
  rate changes, 40, 60-61
School systems
  employment programs' interaction, 22-23, 33, 84-85
  program recruitment practices, 87
School-to-Work Transition program, 127-129, 131-132
Schrank, Robert, 326
Seilor, Joe, 304
Semple, Nat, 291, 293, 332, 334
SER-JOBS for Progress, 82, 295, 317, 321
Service delivery
  CETA system, 294-296, 323-324
  as separate from research objectives, 32-33, 288, 340-342
  system assessment, 22
Service delivery areas, 28, 29
Service Mix Alternatives Demonstration, 102
70001 program, 15, 16, 19, 161-165, 173-174
Sex differentials, see Employment and unemployment; specific programs
Social contexts, 64-65, 348-366
Special Project for Indochinese Youth, 123
Spring, Bill, 289, 291, 293, 298, 327, 332
SRI International, 176, 177, 258, 262-264
Staffing of programs, 90, 312-313
Stafford, Robert, 289
Standardized Assessment System (SAS), 97, 175, 180-181, 193-219, 320-321
Statistical analyses
  Hispanic youth in labor market, 410-461
  women's participation in employment and training programs, 462-485
  youth joblessness and race, 367-409
  See also Data bases
Subminimum wage, 294
Summer Career Exploration Projects, 102
Summer Youth Employment Program (SYEP), 69, 73, 137, 281, 296, 299, 324
  expenditures, 77, 79, 283
  participation figures, 78, 284
  reports disposition, 101, 102
  research design and results, 14, 146, 148-151, 158, 160
  restructure recommendation, 27
  target group, program approach, and administration, 74, 147, 282
Supported Work, 16, 102, 137, 179
  benefit-cost analyses, 144
  research design and results, 12-13, 139, 142-144, 158-160
  target group, program approach, and administration, 138, 141-142
Supported Work Youth Variation, 144

T

Taggart, Robert, 299-304, 308-314, 321, 322, 324, 326-329, 331, 335, 339, 344
Target groups, 105-106. See also specific programs
Targeting and recruiting, 7-8, 86-89
Temporary jobs programs, 12-15, 105, 137-160
Training programs, see Employment programs

U

Unemployment, see Employment and unemployment
Unions, 72, 85
Urban Institute, 176, 177, 258, 264

V

- Ventures in Community Improvement (VICI), 12, 91, 102, 137-141, 159, 160
- Vera Institute, 120
- Vice President's Task Force on Youth Employment, 93, 96, 298, 307, 327-328

W

- Wages, *see* Earnings and wages; *specific programs*
- Westat, Inc., 176, 254, 258, 261-262
- White employment, *see* Employment and unemployment; *specific programs*
- Williams, Harrison, 289, 290
- Women
  - participation in employment and training programs, 27-28, 462-485
  - pregnancy and childbearing, 8, 27-28, 115-116
  - *See also* Employment and unemployment; *specific programs*
- Women's Bureau, 82, 317

Y

- Young Adult Conservation Corps (YACC), 69, 71, 73, 281, 299
  - expenditures, 77, 79, 283
  - participation figures, 78, 284
  - target group, program approach, and administration, 74, 282
- Youth Career Development Project for School-to-Work Transition, 102
- Youth Community Conservation and Improvement Projects (YCCIP), 69, 71, 73, 281, 299
  - expenditures, 77, 78, 283
  - participation figures, 78, 284
  - reports disposition, 101
  - target group, program approach, and administration, 74, 282
- Youth Employment and Demonstration Projects Act of 1977 (YEDPA)
  - discretionary and demonstration project expenditures, 77-83
  - expenditures and participation, 73-77
  - funding, 1, 69-70, 281
  - implementation difficulties, 4-5, 98
  - legislative background, 70-72, 289-299
  - local implementation, 6-7, 83-93
  - mandate, 1, 69, 281
  - national implementation, 5-7, 72-83
  - objectives and evaluation, 21-23
  - *See also specific programs and issues*
- Youth Employment and Training Program (YETP), 69, 71, 73, 281, 299
  - expenditures, 77, 78, 283
  - participation figures, 78, 284
  - reports disposition, 101
  - target group, program approach, and administration, 74, 282
- Youth Incentive Entitlement Pilot Projects (YIEPP), 69, 71, 73, 83, 91, 137, 281, 299
  - Baltimore, 152-155, 157
  - Cincinnati, 152, 153, 155, 157
  - Cleveland, 152, 153, 155, 157
  - Denver, 152, 153, 155
  - design, 310, 311
  - Detroit, 154
  - evaluation of, 334
  - expenditures, 77, 78, 283
  - Louisville, 152, 153, 155
  - Mississippi, 152, 153, 157
  - participation figures, 78, 284

  Phoenix, 152, 153, 155
  political background, 71, 291, 292, 294, 300
  reports disposition, 101, 102
  research design and results, 14-15, 148, 152-160
  target group, program approach, and administration, 74, 147, 151-152, 282
Youth knowledge development plan, 93-98, 281-347
  analytical model, 281-289, 336-345
  demise of, 329-331
  design, 93-96, 304-311
  evaluation of, 21-22
  implementation, 96-98
  influence on policy and practice, 331-336
  organization and management, 299-303, 311-329
  policy system, 324-329
Youth Programs, Office of (OYP), 73
  disbanding of, 330
  staffing problems, 312-313
  YEDPA management, 5-6, 93, 281, 283, 299-303
Youthwork, 6, 81, 314, 315, 318

BEST COPY AVAILABLE

NATIONAL ACADEMY PRESS

The National Academy Press was created by the National Academy of Sciences to publish the reports issued by the Academy and by the National Academy of Engineering, the Institute of Medicine, and the National Research Council, all operating under the charter granted to the National Academy of Sciences by the Congress of the United States.

ISBN 0-309-03595-3

532